

1 JENNIFER A. KUENSTER, State Bar No. 104607
2 **THELEN, MARRIN, JOHNSON & BRIDGES LLP**
3 Two Embarcadero Center, Suite 2100
4 San Francisco, California 94111
5 Telephone: (415) 392-6320

6 Attorneys for Defendant
7 **KAISER ALUMINUM & CHEMICAL CORPORATION**

RECEIVED

JUN 22 1998

WASHTON LAW FIRM

8 SUPERIOR COURT OF THE STATE OF CALIFORNIA
9 IN AND FOR THE COUNTY OF SAN FRANCISCO

10
11 IN RE:

NO. 828684

12
13 COMPLEX ASBESTOS LITIGATION

14 KAISER ALUMINUM & CHEMICAL
15 CORPORATION'S THIRD
16 SUPPLEMENTAL RESPONSES TO
17 PLAINTIFFS' STANDARD
18 INTERROGATORIES TO ALL
19 DEFENDANTS PURSUANT TO
20 GENERAL ORDER 129;
21 INTERROGATORY
22 NOS. 10, 13, 19, 22 and 29

23 **SUPPLEMENTAL RESPONSES TO INTERROGATORY NOS. 10, 13, 19, 22 and 29**

24 **INTERROGATORY NO. 10:**

25 IDENTIFY the person or persons most knowledgeable about:

26 A. YOUR acquisition of RAW ASBESTOS and/or ASBESTOS
27 CONTAINING PRODUCTS;

28 B. YOUR use of RAW ASBESTOS and/or ASBESTOS CONTAINING
PRODUCTS;

C. YOUR contracting with others to do work involving use or handling of

1 RAW ASBESTOS or ASBESTOS CONTAINING PRODUCTS.

2 **SECOND SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 10:**

3 Last known address for those persons identified in Response to Interrogatory No. 10 are as
4 follows:

- 5 1. Ted Aucoin - 105 Whimby Drive, Slidell, LA 70461
- 6 2. William Crates - 14200 S.E. 272nd Street, Kent, WA 98042
- 7 3. G. Stan Fergin - South 3828 Tekoa, Spokane, WA 99203
- 8 4. Mark W. Jones - 3400 Taylor Way, Tacoma, WA 98421
- 9 5. William Carey Salassi - 6 Irving Drive, Ponchatoula, LA 70454
- 10 6. Kenneth Shaw - 1615 Washington Street, East, Charleston, WV 25311
- 11 7. M.A. Peters - 210 Blue Ridge Road, Plymouth Meeting, Pennsylvania 19462

12 **INTERROGATORY NO. 13:**

13 For each of the following, please state whether, at any time within the time frame or until
14 such time as any defendant which had been engaged in MARKETING RAW ASBESTOS or
15 ASBESTOS- CONTAINING PRODUCTS discontinued the MARKETING of such products,
16 THIS DEFENDANT was a member or paid dues for any representative of THIS DEFENDANT
17 (excluding faculty members of educational institutions) to be a member of the following:

- 18 A. American Conference of Governmental Industrial Hygienists;
- 19 B. American Industrial Hygiene Association;
- 20 C. American Petroleum Institute;
- 21 D. American Railroad Association;
- 22 E. Asbestos Cement Producers Association;
- 23 F. Asbestos Information Association (AIA)(please answer through date of
24 your answers);
- 25 G. Asbestos Information Association/North America (AIA/NA)(please answer
26 through date of your answers);
- 27 H. Asbestos Textile Institute (ATI);

- 1 I. Industrial Hygiene Foundation and/or Industrial Health Foundation (IHF);
- 2 J. Industrial Mineral Insulation Manufacturers Institute;
- 3 K. Magnesia Insulation Manufacturers' Association;
- 4 L. Magnesia Silica Insulation Manufacturers Association;
- 5 M. Mineral Wool Institute;
- 6 N. National Insulation Manufacturers Association (NIMA);
- 7 O. National Safety Council;
- 8 P. New York Academy of Sciences;
- 9 Q. Quebec Asbestos Mining Association (QAMA);
- 10 R. Refractories Institute;
- 11 S. Safe Building Alliance (please answer through date of your answers);
- 12 T. Thermal Insulation Manufacturers Association (TIMA);
- 13 U. U.S. Maritime Commission;
- 14 V. IDENTIFY any other organizations, associations or groups of
- 15 manufacturers, miners, distributors, importers, labelers, suppliers, and/or sellers of ASBESTOS-
- 16 CONTAINING PRODUCTS of which THIS DEFENDANT was a member;
- 17 W. IDENTIFY any such representative of THIS DEFENDANT.

18 **SECOND SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 13:**

19 After a diligent search and reasonable inquiry, Kaiser Aluminum has not been able to
20 reconstruct from information reasonably available to it the actual years during which the persons
21 identified in Supplemental Response to Interrogatory No. 13 served on the Committees mentioned
22 in that Response. Based upon information reasonably available to it, Kaiser Aluminum believes
23 that:

24 James P. Hughes served on the Medical Committee of the IHF during at least 1963 and
25 1964, but not before 1960 or after 1966.

26 H.K. Lambie served on the Metals Section of the NSC in the 1950's and 1960's, but not
27 before 1951.

1 J.F. Knight served on committees of the Board of TRI or on the Board itself from at least
2 1966 through the late 1970s.

3 H.M. Nelson served on committees of the Board of TRI or on the Board itself from at least
4 1969 through 1979.

5 C.E. Lindsay served on committees of the Board of TRI during the 1970's.

6 Plaintiff may ascertain the actual dates of Board or Board committee membership of these
7 individuals by reviewing Annual Reports and membership rosters of the IHF, NSC and TRI.

8 **INTERROGATORY NO. 19:**

9 With the exception of OSHA compliance, had THIS DEFENDANT (except for a
10 defendant that is an educational institution) prior to 1980 exchanged DOCUMENTS or
11 communicated with any person or other COMPANY expressly regarding the results of tests and/or
12 studies relating to asbestos exposure in the workplace or the human health consequences of
13 exposure to asbestos? If so, state:

14 A. Each person or COMPANY with whom the information was exchanged or
15 to whom it was communicated;

16 B. The date(s) of any such exchanges or communications;

17 C. The IDENTITY of the custodian of such DOCUMENTS.

18 **SECOND SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 19:**

19 Kaiser Aluminum has not yet located any specific document covered by this Interrogatory
20 that it is withholding on a claim of privilege. However, Kaiser Aluminum reserves the right to
21 withhold on the basis of a claim of attorney-client or work product privilege any covered
22 communication that occurred between it and any person or entity for purposes of the defense of
23 any pending or anticipated legal claim against Kaiser Aluminum if any such document is
24 discovered. Kaiser Aluminum will identify any such document that is actually withheld on a claim
25 of privilege.

26 **INTERROGATORY NO. 22:**

27 Has THIS DEFENDANT (except for a defendant that is an educational institution)

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1 conducted, or caused to be conducted, any tests and/or studies on ambient asbestos dust levels at
2 any location or job site where ASBESTOS-CONTAINING PRODUCTS were installed, utilized
3 or removed? If so, for the first 5 tests and/or studies, state:

4 A. The location, including name and address, at which each such test and/or
5 study was conducted;

6 B. The individual(s) or entity conducting each such test and/or study;

7 C. The date of each such test and/or study;

8 D. Whether THIS DEFENDANT has any DOCUMENTS containing the
9 results and/or conclusions of each such test and/or study;

10 E. The IDENTITY of the custodian of such DOCUMENTS.

11 **SECOND SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 22:**

12 The earliest available documents pertaining to air sampling by Kaiser Aluminum for
13 respirable asbestos fibers are attached hereto as Exhibit A.

14 **INTERROGATORY NO. 29:**

15 If YOUR answer to any of subparts of Interrogatory 28 regarding RAW ASBESTOS is in
16 the affirmative, state:

17 A. The trade, brand name, and/or generic name of such RAW ASBESTOS
18 milled or MARKETED in any form or quantity between 1930 and 1985;

19 B. The date(s) such RAW ASBESTOS was first placed on the market,
20 including the date(s) such RAW ASBESTOS was first marketed;

21 1. On an experimental basis;

22 2. On a test basis;

23 3. For sale.

24 C. The date(s) such RAW ASBESTOS:

25 1. Ceased to be produced; or

26 2. Was recalled from the market, if ever.

27 D. A description of the chemical composition of such RAW ASBESTOS,

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1 including the type and/or grade of asbestos;

2 E. A description of the physical appearance and nature of such RAW
3 ASBESTOS, including any color coding, distinctive marking and/or logo on the packaging or
4 container;

5 F. A detailed description of the intended use of such RAW ASBESTOS,
6 including any temperature limits for each such use;

7 G. Whether such RAW ASBESTOS was on the U.S. Government's "Qualified
8 Products List," and if so, the inclusive dates it was on such list;

9 H. IDENTIFY to whom such RAW ASBESTOS has, at any time, been sold.
10 As to each such, state:

11 I. Whether any of THIS DEFENDANT's RAW ASBESTOS has, at any time,
12 been sold, shipped, or otherwise distributed, used or installed to or at any COMPANY (including
13 power company or utility), governmental agency or entity, shipyard, distributor, refinery,
14 contractor, supplier, PREMISE owner or occupant, ship owner, or other PREMISE or site in the
15 GEOGRAPHIC AREA and whether any of THIS DEFENDANT's RAW ASBESTOS has at any
16 time, been sold to any manufacturer, or manufacturing facility, of ASBESTOS-CONTAINING
17 PRODUCTS. If so, state:

18 1. The names of each such COMPANY, governmental agency or
19 entity, shipyard, distributor, supplier, manufacturer or refinery;

20 2. The inclusive dates of each such sale, and the amount (quantity) and
21 the trade brand name of such RAW ASBESTOS sold;

22 3. The manner of shipment (e.g. boat, rail, etc.).

23 4. Whether you have any records indicating any such sale or shipment
24 and, if so, the name, address and job classification of each person who currently has possession of
25 such records.

26 5. Either (1) attach all DOCUMENTS evidencing the information
27 sought in this Interrogatory and its subparts to your answers to these Interrogatories, or (2) attach

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1 disks containing such data, or (3) describe such DOCUMENTS with sufficient particularity that
2 they may be made the subject of a request for production of documents.

3 **SECOND SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 29:**

4 After diligent investigation, Kaiser Aluminum further answers Interrogatory No. 29
5 regarding the limited transactions in asbestos fibers by a former subsidiary, Kaiser Trading
6 Company, as follows:

7 A and D: Various grades of chrysotile asbestos fiber, including 7D, 7DS, 7M and
8 7MS.

9 B and C: Kaiser Aluminum believes that the Kaiser Trading Company commenced
10 marketing of the chrysotile asbestos fibers after July of 1978 and ceased marketing of any
11 chrysotile asbestos fibers by the end of 1978.

12 E: The chrysotile asbestos fibers were packaged in pulpable paper bags with warning
13 signs stamped on each bag. Kaiser Aluminum does not have further information responsive to this
14 inquiry.

15 F. Unknown.

16 G. Due to the limited nature and short duration of the transactions in chrysotile
17 asbestos fibers by the former Kaiser Trading Company, Kaiser Aluminum does not believe that the
18 chrysotile asbestos fibers were placed on the "Qualified Products List" of the U.S. Government.

19 H. Kaiser Aluminum believes that there were sales to GAF Corporation in Wayne,
20 New Jersey, Nicolet Industries in Ambler, Pennsylvania, Monsey Products Company in Kimberton,
21 Pennsylvania, Gold Bond Building Products Division of National Gypsum in Buffalo, New York
22 and Gulf States Asphalt Company in Houston, Texas.

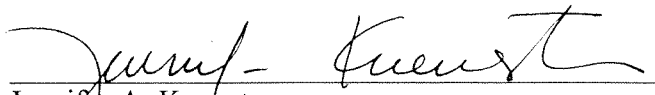
23 I. Kaiser Aluminum is not aware of any sales in the Geographic Area. Three of the
24 companies to whom chrysotile asbestos fibers were sold engaged in the manufacture or sale of
25 asbestos or asbestos-containing products. These were GAF Corporation, Nicolet Industries and
26 National Gypsum. Counsel for Kaiser Aluminum have located sales orders, invoices and purchase
27 orders relating to the sale of chrysotile asbestos fibers (grade 7D, 7DS, 7M and 7MS) to GAF

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Corporation and the sale of chrysotile fibers (grade 7M) to Nicolet Industries.

Dated: June 1, 1998

THELEN, MARRIN, JOHNSON & BRIDGES LLP

By 
Jennifer A. Kuenster
Attorneys for Defendant
Kaiser Aluminum & Chemical Corporation

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VERIFICATION

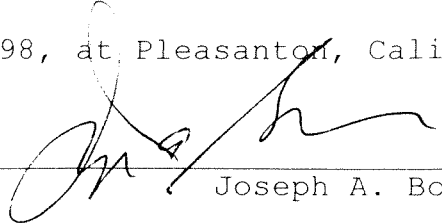
COUNTY OF SAN FRANCISCO)
) SS
STATE OF CALIFORNIA)

I, Joseph A. Bonn, am Vice President of Kaiser Aluminum & Chemical Corporation, and am duly authorized to execute this Verification, under oath and on behalf of Kaiser Aluminum & Chemical Corporation. I have read the foregoing Kaiser Aluminum & Chemical Corporation's Second Supplemental Responses to Plaintiffs' Standard Interrogatories to All Defendants Pursuant To General Order 129; Interrogatory nos. 10, 13, 19, 22 and 29 in In Re: Complex Asbestos Litigation, SFSC 828684, and am informed and believe, and on that basis state, that the matters contained therein are true.

The information set forth in these answers was collected by corporate personnel and other persons with knowledge of the facts; such information is not necessarily within my personal knowledge. However, on behalf of the corporation, I solemnly affirm, under the penalties of perjury, that the foregoing answers are true and accurate to the best of my knowledge, information, and belief.

I declare under penalty of perjury that the foregoing is true and correct.

Executed JUNE 16, 1998, at Pleasanton, California.



Joseph A. Bonn

EXHIBIT A

INTER - OFFICE MEMORANDUM

To: L. J. McAdams - Chalmette

Date: August 11, 1970

cc: J. W. Armstrong - 549KC
 J. A. Fitzgerald - Chalmette
 J. P. Hughes, M.D. - 2177KC
 L. F. Hunt - 767KC
 F. H. Lawson - 567KC
 R. Radakovich - Chalmette
 A. J. Trommershausen - 630KC
 W. W. Wolfe, M.D. - Chalmette
 Sheldon Hanemann - Louisiana Health Dept.

From: *From*
 T. J. Walker
 631KC

Subject: Asbestos in DC Casting

I have reviewed with Mr. Sheldon Hanemann, Louisiana Department of Health Industrial Hygienist, the health implications arising from your use of asbestos and mica wash in distributor troughs in DC casting. We have concluded that since the exposure time is short the health hazard from exposure to asbestos in this area is minimal as presently used.

General Information

It is my understanding that, over the past two years, 1000 pounds of asbestos short per month is used for casting operation in DC to form linings in distributors and to prevent leaks around downspouts. Lime was formerly used, but its use was discontinued because lime absorbs moisture and presents a potential explosion hazard when in contact with molten metal. John Fitzgerald is presently investigating alternate methods. Also, it is my understanding that DC personnel seldom are exposed to asbestos and mica dust in excess of 30 minutes per shift.

Sampling Methods and Results

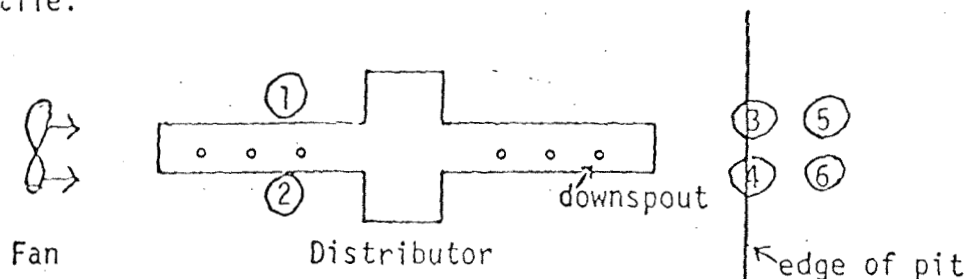
The standard midget impinger containing 50% ethyl alcohol as collecting medium was used to collect samples. The associated counting method uses a microscope with a 10X objective to examine particles which have settled in a cell having a depth of 1 mm. This microscope is capable of detecting fibers and dust greater than 1 μ in size.

Sample No.	Sampling Time min.	Total Fibers >5 μ	Total Particles >5 μ	Total Particles	mppcf
1	10.5	70,000	130,000	6,400,000	6.1
2	10.5	--	40,000	900,000	1.0
3	11.5	--	40,000	950,000	0.8
4	11.5	--	40,000	470,000	0.5
5	7.0	--	50,000	600,000	0.9
6	7.0	--	30,000	500,000	0.8

mppcf = million particles per cubic foot

August 11, 1970

From microscopic examination it was determined that the fibrous material was chrysotile.



The above sketch indicates sampling positions at the distributor. Samples 1 and 2 were taken as close to the breathing zone of the two workers as was possible. The remaining four samples were taken at the edge of the pit, downwind from the fan.

Criteria

Asbestos is a generic term applying to a number of mineral silicates which are incombustible in air and can be separated into filaments. The most widely used in industry is chrysotile, a magnesium silicate from serpentine.

It is well established through industrial experience that exposure to asbestos is associated with development of a disabling pneumoconiosis in man. The present threshold value for asbestos dust in the United States is 2.0 millions of particles per cubic foot of air (mppcf) for a daily eight-hour exposure, 40 hours per week. This value was established in 1969 (the previous recommended value was 5.0 mppcf) by the American Conference of Governmental Industrial Hygienists. Threshold Limit Values (TLV) refer to airborne concentrations of asbestos dust which represent conditions under which it is believed that nearly all workers may be repeatedly exposed without adverse effect. They are used as guides in the control of health hazards, and should not be regarded as fine lines between safe and dangerous concentrations. These limits are based on the best available information from industrial experience, and from human and animal studies.

Long fibers, more than 5 microns in length, are suspected of being more injurious to lung tissue than shorter fibers.

The TLV for mica is 20 mppcf.

Discussion

In Sample 1, the concentration of total particulate containing asbestos short was 6.1 mppcf, approximately 3 times the TLV of 2.0 mppcf. The concentration in each of the other samples was lower than the TLV. Since the exposure of personnel to these concentrations is relatively short (usually less than 30 minutes), there is minimal risk from the asbestos bodies.

August 11, 1970

However, the risk can easily be lessened by inexpensive engineering controls. Possible controls include:

1. Turning off man fans during handling or working with asbestos.
2. Vacuuming the asbestos rather than sweeping.
3. Collection of asbestos dust at source by using high velocity, low volume collection system on chisels and other tools.
(I sent John Fitzgerald some information on this collection system.)

Acknowledgment

The help of Bill Crates is greatly appreciated. His assistance expedited this study.

TJW:gb

DATE	SAMPLE #	RADGE #		MIN'S	N	FIBERS \bar{x}	EX.	EX ²	ρ	\bar{x}	EX	EX ²	TOTAL PARTICULATE M ³ /M ³
6-26-72	57	684	DRILL	107		3	A.F. KIDDER						
6-26-72	91	684	DRILL	26		1.5							
6-26-72	94	684	BAND SAW	93		9.8							
6-26-72	97	684	ROUTER	70		1.6							
6-26-72	101	684	DRILL	467		1.8				8.8			
6-26-72	78	3269	CLEAN-UP	46		1.3	J. WALLACE						
6-26-72	88	3269	BAND SAW	29		1.9							
6-26-72	89	3269	SANDING	84		1.4							
6-26-72	95	3269	"	66		1.5							
6-26-72	99	3269	"	181		1.5							
6-26-72	60	7746	DRILL	466		1.2	G. MARTIN			8.4			
6-26-72	62	7746	"	33		1.3							
6-26-72	93	7746	BAND SAW	80		1.3							
6-26-72	98	7746	DRILL	103		2.3							
6-26-72	59	2763	DRILL	177		1.1							
6-26-72	61	2763	SANDING	453		1.3				7.1			
6-26-72	90	2763	"	36		1.6	A. MENA-SSES						
6-26-72	96	2763	"	49		2.0							
6-26-72	57	11237	DRILL	87		1.4							
6-26-72	92	11237	"	40		1.0							
6-26-72	92	11237	BAND SAW	267		1.2	L. COULTER						
6-26-72	92	11237	BAND SAW	111		2.2							
6-26-72	92	11237	BAND SAW	20		1.0							
6-26-72	92	11237	BAND SAW	146		1.0							
6-26-72	92	11237	BAND SAW	1799	5	1.30	6.5	8.181	.27	8.88	44.4	910.54	1.80
AUG. PERSONNEL													
6-26-72	DRILL PAUSE			645	7	1.15							
6-26-72	BAND SAW			245	4	3.03							
6-26-72	ROUTER			570	1	0.90							
6-26-72	SANDING			573	7	1.49							
6-26-72	CLEAN-UP			46	1	1.30							

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PROOF OF SERVICE BY MAIL

In Re Complex Asbestos Litigation Action No. 956109

I, Lisa Wade Breen, declare as follows:

I am over the age of 18 years and not a party to the within action. My business address is Two Embarcadero Center, San Francisco, California 94111, in the County of San Francisco.

On June 18, 1998 I served a true copy of the attached

KAISER ALUMINUM & CHEMICAL CORPORATION'S SECOND
SUPPLEMENTAL RESPONSES TO PLAINTIFFS' STANDARD
INTERROGATORIES TO ALL DEFENDANTS PURSUANT TO GENERAL
ORDER 129; INTERROGATORY NOS. 10, 13, 19, 22 and 29

by placing for collection and deposit in the United States mail a copy of these papers at Thelen, Marrin, Johnson & Bridges, Two Embarcadero Center, San Francisco 94111 in a sealed envelope addressed to:

Anne Braudis, Esq.
BRAYTON HARLEY CURTIS
222 Rush Landing Road
P.O. Box 2109
Novato, CA 94948

I am familiar with the practice of Thelen, Marrin, Johnson & Bridges for the collection and the processing of correspondence for mailing with the United States Postal Service. In accordance with the ordinary course of business, the above-mentioned documents will be deposited with the United States Postal Service on the same day on which I placed the document in the internal mail system of Thelen, Marrin, Johnson & Bridges for deposit.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed on June 18, 1998 at San Francisco, California.

Lisa Wade Breen

PROOF OF SERVICE

CASE: IN RE COMPLEX ASBESTOS LITIGATION
SAN FRANCISCO

SF: 828684

I, Wendy Howe am employed in the City and County of San Francisco, California, I am over the age of eighteen years and not a party to the within action; my business address is Two Embarcadero Center, Suite 2100, San Francisco, California 94111. On **JUNE 19, 1998** I served the following document(s):

**KAISER ALUMINUM & CHEMCICAL CORPORATION'S THIRD
SUPPLEMENTAL RESPONSES TO PLAINTIFFS' STANDARD
INTERROGATORIES TO ALL DEFENDANTS PURSUANT TO GENERAL
ORDER 129.**

on the parties listed through their attorneys of record, by placing true copies thereof in sealed envelopes addressed and designated for service as listed below:

By First Class Mail - Each such envelope, was prepared with first-class postage thereon fully prepaid, to be deposited in a recognized place of deposit of the U.S. Mail in San Francisco, California, for collection and mailing to the office of the addressee on the date shown herein following ordinary business practices.

ADDRESSEE:

BERRY & BERRY
1300 CLAY STREET, 9TH FLOOR
STATION D • PO BOX 70250
OAKLAND, CA 94612-0250

KAZAN, McCLAIN, EDISES, SIMON &
ABRAMS
171 12TH STREET, 3RD FLOOR
OAKLAND, CA 94612

WARTNICK, CHABER, HAROWITZ, et al.
101 CALIFORNIA STREET, 22nd FLOOR
SAN FRANCISCO, CA 94111

BRAYTON, HARLEY, CURTIS
222 RUSH LANDING RD, P.O. BOX 2109
NOVATO, CA 94948

HARRISON & DeGARMO
ONE DANIEL BURNHAM COURT
SUITE 220C
SAN FRANCISCO, CA 94109

LAW OFFICES OF BRUCE AHNFELDT
P.O. BOX 6238
NAPA, CA 94581

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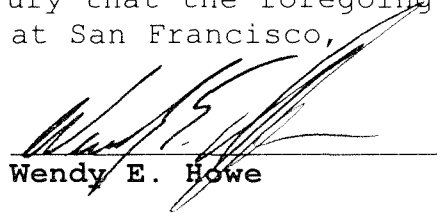
LAW OFFICES OF CHRISTOPHER GRELL
685 MARKET STREET, SUITE 540
THE MONADNOCK BUILDING
SAN FRANCISCO, CA 94105

LAW OFFICES OF JERRY NEIL PAUL
16830 VENTURA BLVD., SUITE 500
ENCINO, CA 91430

LAW OFFICES OF JACK CLAPPER
2330 MARINSHIP WAY, SUITE 140
SAUSALITO, CA 94965

LAW OFFICES OF VISSE & YANEZ
ONE DANIEL BURNHAM COURT
SUITE 220C
SAN FRANCISCO, CA 94109

I declare under penalty of perjury that the foregoing is true
and correct. Executed **19 JUNE 1998** at San Francisco,
California.


Wendy E. Howe

1 JENNIFER KUENSTER, SBN 104607
THELEN, MARRIN, JOHNSON & BRIDGES LLP
2 Two Embarcadero Center, Suite 2100
3 San Francisco, California 94111-3945
Telephone: (415) 392-6320
4 Facsimile: (415) 421-1068

RECEIVED

JUN 22 1998

WARTNICK LAW FIRM

5 Attorneys for Defendant
KAISER ALUMINUM & CHEMICAL CORPORATION
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8 SUPERIOR COURT OF THE STATE OF CALIFORNIA
9 COUNTY OF SAN FRANCISCO

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12 IN RE:
13 COMPLEX ASBESTOS LITIGATION
14

CASE NO. 828684
DEFENDANT KAISER ALUMINUM &
CHEMICAL CORPORATION'S 1998
RESPONSE TO PLAINTIFFS' STANDARD
INTERROGATORIES TO
ALL DEFENDANTS PURSUANT TO
GENERAL ORDER 129

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16
17 Defendant Kaiser Aluminum & Chemical Corporation ("KACC") hereby submits its 1998
18 update to the General Order 129 Interrogatories. All information contained in KACC's response
19 dated June 19, 1997, its first supplemental response, dated December 16, 1997, its second
20 supplemental response, dated March 6, 1998, and its third supplemental response, dated June 1,
21 1998, is still true and complete.

22
23 Dated: June 19, 1998

THELEN, MARRIN, JOHNSON & BRIDGES LLP

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25
26 By Jennifer Kuenster
27 Jennifer Kuenster
Attorneys for Defendant
KAISER ALUMINUM & CHEMICAL
CORPORATION
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VERIFICATION TO FOLLOW

PROOF OF SERVICE

CASE: IN RE COMPLEX ASBESTOS LITIGATION
SAN FRANCISCO

SF: 828684

I, Wendy Howe am employed in the City and County of San Francisco, California, I am over the age of eighteen years and not a party to the within action; my business address is Two Embarcadero Center, Suite 2100, San Francisco, California 94111. On **JUNE 19, 1998** I served the following document(s):

**KAISER ALUMINUM & CHEMCICAL CORPORATION'S THIRD
SUPPLEMENTAL RESPONSES TO PLAINTIFFS' STANDARD
INTERROGATORIES TO ALL DEFENDANTS PURSUANT TO GENERAL
ORDER 129; INTERROGATORY NOS. 10, 13, 19, 22 and 29**

on the parties listed through their attorneys of record, by placing true copies thereof in sealed envelopes addressed and designated for service as listed below:

By First Class Mail - Each such envelope, was prepared with first-class postage thereon fully prepaid, to be deposited in a recognized place of deposit of the U.S. Mail in San Francisco, California, for collection and mailing to the office of the addressee on the date shown herein following ordinary business practices.

ADDRESSEE:

BERRY & BERRY
1300 CLAY STREET, 9TH FLOOR
STATION D • PO BOX 70250
OAKLAND, CA 94612-0250

KAZAN, McCLAIN, EDISES, SIMON &
ABRAMS
171 12TH STREET, 3RD FLOOR
OAKLAND, CA 94612

WARTNICK, CHABER, HAROWITZ, et al.
101 CALIFORNIA STREET, 22nd FLOOR
SAN FRANCISCO, CA 94111

BRAYTON, HARLEY, CURTIS
222 RUSH LANDING RD, P.O. BOX 2109
NOVATO, CA 94948

HARRISON & DeGARMO
ONE DANIEL BURNHAM COURT
SUITE 220C
SAN FRANCISCO, CA 94109

LAW OFFICES OF BRUCE AHNFELDT
P.O. BOX 6238
NAPA, CA 94581

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///
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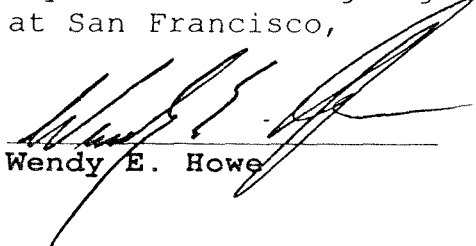
LAW OFFICES OF CHRISTOPHER GRELL
685 MARKET STREET, SUITE 540
THE MONADNOCK BUILDING
SAN FRANCISCO, CA 94105

LAW OFFICES OF JERRY NEIL PAUL
16830 VENTURA BLVD., SUITE 500
ENCINO, CA 91430

LAW OFFICES OF JACK CLAPPER
2330 MARINSHIP WAY, SUITE 140
SAUSALITO, CA 94965

LAW OFFICES OF VISSE & YANEZ
ONE DANIEL BURNHAM COURT
SUITE 220C
SAN FRANCISCO, CA 94109

I declare under penalty of perjury that the foregoing is true
and correct. Executed **19 JUNE 1998** at San Francisco,
California.


Wendy E. Howe

Deceased

122.6

JENNIFER A. KUENSTER, State Bar No. 104607
HELEN L. CONROY, State Bar No. 122775
THELEN, MARRIN, JOHNSON & BRIDGES LLP
Two Embarcadero Center, Suite 2100
San Francisco, California 94111
Telephone: (415) 392-6320

Attorneys for Defendant
KAISER ALUMINUM & CHEMICAL CORPORATION

RECEIVED

JUN 26 1998

WARTNICK LAW FIRM

SUPERIOR COURT OF THE STATE OF CALIFORNIA
IN AND FOR THE COUNTY OF SAN FRANCISCO

JOHN H. MONTANO, et al.,
Plaintiffs,
vs.
RAYBESTOS-MANHATTAN INC., et
al.,
Defendants.

Case No.: 993450

**KAISER ALUMINUM & CHEMICAL
CORPORATION'S RESPONSES TO
PLAINTIFF'S FIRST SET OF
FORM INTERROGATORIES**

PROPOUNDING PARTY: Plaintiff JOHN H. MONTANO

RESPONDING PARTY: Defendant KAISER ALUMINUM &
CHEMICAL CORPORATION

SET NUMBER: One

Pursuant to Section 2033.5 of the Code of Civil Procedure,
Defendant KAISER ALUMINUM & CHEMICAL CORPORATION ("KACC"), hereby
responds to plaintiff's first set of form interrogatories as
follows:

GENERAL OBJECTIONS

1. KACC objects to each and every interrogatory to the

#296369

1 extent that it seeks information which does not refer or relate
2 to the events, occurrences, time periods, or locations at issue
3 in this lawsuit and, as such, is not reasonably likely to lead to
4 the discovery of admissible evidence. Such discovery is
5 irrelevant, unduly burdensome and harassing.

6 2. KACC objects to each and every interrogatory to the
7 extent that it requires the disclosure of information (a) that
8 was prepared in anticipation of litigation; (b) that constitutes
9 privileged attorney-client material; (c) that constitutes
10 attorney work product; (d) that is subject to any other
11 privilege; and/or, (e) that is otherwise protected from
12 disclosure.

13 3. KACC objects to each and every interrogatory to the
14 extent that it seeks the disclosure of information not within its
15 possession or control.

16 4. KACC objects to each and every interrogatory to the
17 extent that it seeks information equally available to plaintiffs.

18 5. KACC objects to each and every interrogatory to the
19 extent that it is overbroad, burdensome, oppressive, harassing
20 and repetitious.

21 6. KACC objects to each and every interrogatory, and to
22 the defined terms therein, to the extent that they are vague,
23 ambiguous and unintelligible, and susceptible to more than one
24 meaning, particularly in the use of the word "INCIDENT" in that
25 plaintiff has named multiple work sites at which she claims
26 decedent was exposed to asbestos-containing products, each of
27 which, according to plaintiff, constitutes an "INCIDENT."

28 Plaintiff has made no attempt to narrow this definition for the

1 particular defendant to which these interrogatories are directed.

2 7. KACC objects to each and every interrogatory to the
3 extent that it is vexatious, unreasonable, and designed to
4 harass.

5 8. KACC objects to each and every interrogatory to the
6 extent that it purports to require responses to each and every
7 interrogatory by KACC on behalf of any entity or entities other
8 than KACC.

9 9. KACC objects to each and every interrogatory to the
10 extent that it calls for a legal conclusion.

11 10. KACC also notes that although it has made a good faith
12 effort to respond to these interrogatories, KACC's investigation
13 and discovery regarding these matters is ongoing. Accordingly,
14 KACC's responses are based on information currently available and
15 KACC expressly reserves the right to supplement and/or amend
16 these responses should additional and/or contradictory
17 information come to light at a later date.

18 11. The above-stated objections are hereby made applicable
19 to each of plaintiff's interrogatories and are incorporated into
20 each response as though set forth in full. Each response shall
21 be deemed to be subject to, and shall not waive, any of the
22 foregoing objections.

23 **RESPONSES TO FORM INTERROGATORIES**

24 **FORM INTERROGATORY NO. 12.1**

25 State the name, ADDRESS, and telephone number of each
26 individual:

27 (a) who witnessed the INCIDENT or the events occurring
28 immediately before or after the INCIDENT;

- 1 (b) who made any statement at the scene of the INCIDENT;
- 2 (c) who heard any statements made about the INCIDENT by any
- 3 individual at the scene;
- 4 (d) who YOU OR ANYONE ACTING ON YOUR BEHALF claim has
- 5 knowledge of the INCIDENT (except for expert witnesses covered by
- 6 Code of Civil Procedure §2034).

7 **RESPONSE TO FORM INTERROGATORY NO. 12.1:**

8 KACC objects to this interrogatory as being vague, ambiguous

9 and confusing. Plaintiffs' use of the word "INCIDENT" is vague

10 and ambiguous as plaintiffs have identified multiple work sites

11 at which they claim decedent was exposed to asbestos, each of

12 which is deemed by plaintiffs to constitute an "INCIDENT." Thus,

13 it is unclear which particular INCIDENT is being referred to by

14 plaintiffs and if it refers to all "INCIDENTS," it is compound.

15 As plaintiffs have not contended or specifically designated

16 how, if at all, KACC is related to each of the identified work

17 sites, KACC is uncertain as to how to respond to this

18 interrogatory. KACC cannot reasonably respond to this

19 interrogatory as the interrogatories are not directed towards any

20 particular time period, any work place, or any specific

21 occurrence alleged by plaintiffs, thus making it difficult and

22 confusing for KACC to determine whether it had any contact with a

23 particular work site. It is plaintiffs' burden to provide this

24 type of information before KACC can reasonably be expected to

25 respond to this form interrogatory.

26 Subject to and without waiving the foregoing objection, KACC

27 responds to this interrogatory as follows: Without a more

28 specific definition of "INCIDENT" by plaintiffs, KACC cannot

1 reasonably respond to Interrogatory No. 12.1 except to refer
2 plaintiffs to its response to General Order Interrogatory No. 33
3 and to plaintiffs' own answers to interrogatories which list co-
4 workers. With respect to Interrogatory Nos. 12.2 through 12.7,
5 KACC's response to each of these interrogatories is: Not as of
6 the present. However, if and when additional facts underlying
7 this claims are disclosed by plaintiffs, KACC will investigate
8 the claim.

9 **FORM INTERROGATORY NO. 12.2:**

10 Have YOU OR ANYONE ACTING ON YOUR BEHALF interviewed any
11 individual concerning the INCIDENT? If so, for each individual
12 state:

13 (a) the name, ADDRESS, and telephone number of the
14 individual interviewed;

15 (b) the date of the interview;

16 (c) the name, ADDRESS, and telephone number of the PERSON
17 who conducted the interview.

18 **RESPONSE TO FORM INTERROGATORY NO. 12.2:**

19 KACC incorporates its response to No. 12.1 as if fully
20 stated herein.

21 **FORM INTERROGATORY NO. 12.3:**

22 Have YOU OR ANYONE ACTING ON YOUR BEHALF obtained a written
23 or recorded statement from any individual concerning the
24 INCIDENT? If so, for each statement state:

25 (a) the name, ADDRESS, and telephone number of the
26 individual from whom the statement was obtained;

27 (b) the name, ADDRESS, and telephone number of the
28 individual who obtained the statement;

- 1 (c) the date the statement was obtained;
2 (d) the name, ADDRESS, and telephone number of the PERSON
3 who has the original statement or a copy.

4 **RESPONSE TO FORM INTERROGATORY NO. 12.3**

5 KACC incorporates its response to No. 12.1 as if fully
6 stated herein.

7 **FORM INTERROGATORY NO. 12.4:**

8 Do YOU OR ANYONE ACTING ON YOUR BEHALF know of any
9 photographs, films, or videotapes depicting any place, object, or
10 individual concerning the INCIDENT or plaintiff's injuries? Is
11 so, state:

12 (a) the number of photographs or feet of film or videotape;

13 (b) the places, objects, or persons photographed, filmed,
14 or videotaped;

15 (c) the date the photographs, films, or videotapes were
16 taken;

17 (d) the name, ADDRESS, and telephone number of the
18 individual taking the photographs, films, or videotapes;

19 (e) the name, ADDRESS, and telephone number of each PERSON
20 who has the original or a copy.

21 **RESPONSE TO FORM INTERROGATORY NO. 12.4:**

22 KACC incorporates its response to No. 12.1 as if fully
23 stated herein.

24 **FORM INTERROGATORY NO. 12:5:**

25 Do YOU OR ANYONE ACTING ON YOUR BEHALF know of any diagram,
26 reproduction, or model of any place or thing (except for items
27 developed by expert witnesses covered by Code of Civil Procedure
28 §2034 concerning the INCIDENT? If so, for each item state:

- 1 (a) the type (i.e., diagram, reproduction, or model);
2 (b) the subject matter;
3 (c) the name, ADDRESS, and telephone number of each PERSON
4 who has it.

5 **RESPONSE TO FORM INTERROGATORY NO. 12.5:**

6 KACC incorporates its response to No. 12.1 as if fully
7 stated herein.

8 **FORM INTERROGATORY NO. 12.6:**

9 Was a report made by any PERSON concerning the INCIDENT? If
10 so, state:

11 (a) the name, title, identification number, and employer of
12 the PERSON who made the report;

13 (b) the date and type of report made;

14 (c) the name, ADDRESS, and telephone number of the PERSON
15 for whom the report was made.

16 **RESPONSE TO FORM INTERROGATORY NO. 12.6:**

17 KACC incorporates its response to No. 12.1 as if fully
18 stated herein.

19 **FORM INTERROGATORY NO. 12.7:**

20 Have YOU OR ANYONE ACTING ON YOUR BEHALF inspected the scene
21 of the INCIDENT? If so, for each inspection state:

22 (a) the name, ADDRESS, and telephone number of the
23 individual making the inspection (except for expert witnesses
24 covered by Code of Civil Procedure §2034);

25 (b) the date of the inspection.

26 **RESPONSE TO FORM INTERROGATORY NO. 12.7:**

27 KACC incorporates its response to No. 12.1 as if fully
28 stated herein.

1 **FORM INTERROGATORY NO. 13.1:**

2 Have YOU OR ANYONE ACTING ON YOUR BEHALF conducted
3 surveillance of any individual involved in the INCIDENT or any
4 party to this action: If so, for each surveillance state:

5 (a) the name, ADDRESS, and telephone number of the
6 individual or party;

7 (b) the time, date, and place of the surveillance;

8 (c) the name, ADDRESS, and telephone number of the
9 individual who conducted the surveillance.

10 **RESPONSE TO FORM INTERROGATORY NO. 13.1:**

11 KACC objects to this interrogatory as being vague, ambiguous
12 and confusing. Plaintiffs' use of the word "INCIDENT" is vague
13 and ambiguous as plaintiffs have identified multiple work sites
14 at which they claim decedent was exposed to asbestos, each of
15 which is deemed by plaintiffs to constitute an "INCIDENT." Thus,
16 it is unclear which particular INCIDENT is being referred to by
17 plaintiffs. As plaintiffs have not contended or specifically
18 designated how, if at all, KACC is related to each of the
19 identified work sites, KACC is uncertain as to how to respond to
20 this interrogatory. KACC cannot reasonably respond to this
21 interrogatory as the interrogatory is not directed towards any
22 particular time period, any work place, or any specific
23 occurrence alleged by plaintiffs, thus making it difficult and
24 confusing for KACC to determine whether it had any contact with a
25 particular work site. It is plaintiffs' burden to provide this
26 type of information before KACC can reasonably be expected to
27 respond to this form interrogatory.

28 KACC further objects to this interrogatory to the extent

1 that it seeks information protected by the attorney client and
2 work product privileges.

3 Subject to and without waiving its objections, KACC responds
4 to this interrogatory as follows: No.

5 **FORM INTERROGATORY NO. 13.2:**

6 Has a written report been prepared on the surveillance? If
7 so, for each written report state:

8 (a) the title;

9 (b) the date;

10 (c) the name, ADDRESS, and telephone number of the
11 individual who prepared the report;

12 (d) the name, ADDRESS, and telephone number of each PERSON
13 who has the original or a copy.

14 **RESPONSE TO FORM INTERROGATORY NO. 13.2:**

15 Not applicable.

16 **FORM INTERROGATORY NO. 15.1:**

17 Identify each denial of a material allegation and each
18 special or affirmative defense in your pleadings and for each:

19 (a) state all facts upon which you base the denial or
20 special or affirmative defense;

21 (b) state the names, ADDRESSES, and telephone numbers of
22 all PERSONS who have knowledge of those facts;

23 (c) identify all DOCUMENTS and other tangible things which
24 support your denial or special or affirmative defense, and state
25 the name, ADDRESS, and telephone number of the PERSON who has
26 each document.

27 **RESPONSE TO FORM INTERROGATORY NO. 15.1:**

28 KACC objects to this interrogatory on the grounds that it

1 seeks information relating to the basis of KACC's contentions in
2 the answer to the complaint filed in this case, the disclosure of
3 which is protected by the attorney-client privilege and the work
4 product doctrine. KACC also objects to the word "material" as
5 vague and ambiguous. Without waiving, and subject to the
6 foregoing objections, KACC states that it has not abandoned any
7 affirmative defense and that any information it may have
8 supporting these contentions or any denial of allegations is
9 equally available to plaintiffs, as it has otherwise been
10 elicited in discovery in this action, including but not limited
11 to plaintiff's deposition testimony.

12 KACC has propounded discovery to plaintiff requesting
13 detailed factual explanations regarding the material allegations
14 of the complaint. As all the information plaintiffs have
15 provided to date consists of the standard asbestos-case
16 interrogatories, responses to specific interrogatories and other
17 discovery, social security records and deposition testimony none
18 of which explains in any way the substance of plaintiffs'
19 conclusory allegations against KACC. Without more specific
20 information about plaintiffs' claims against KACC, it cannot at
21 this time state all the facts upon which it bases its denials or
22 defenses.

23 Subject to and without waiving its objections, KACC responds
24 that, except for several names that were too vague or for which
25 no records could be found, none of the ships identified by
26 plaintiffs in their answers to Standard Interrogatories or the
27 amended responses to special interrogatories were built by
28 Permanente Metals Corporation, KACC's shipbuilding predecessor.

1 KACC further responds that discovery is continuing.

2 **FORM INTERROGATORY NO. 16.1:**

3 Do you contend that any PERSON, other than you or plaintiff,
4 contributed to the occurrence of the INCIDENT or the injuries or
5 damages claimed by plaintiff? If so, for each PERSON:

6 (a) state the name, ADDRESS, and telephone number of the
7 person.

8 (b) state all facts upon which you base your contention;

9 (c) state the name, ADDRESSES, and telephone numbers of all
10 PERSONS who have knowledge of the facts;

11 (d) identify all DOCUMENTS and other tangible things that
12 support your contention and state the name, ADDRESS, and
13 telephone number of the PERSON who has each DOCUMENT or thing.

14 **RESPONSE TO FORM INTERROGATORY NO. 16.1:**

15 KACC objects to this interrogatory as being vague, ambiguous
16 and confusing. Plaintiffs' use of the word "INCIDENT" is vague
17 and ambiguous as plaintiffs have identified multiple work sites
18 at which they claim decedent was exposed to asbestos, each of
19 which is deemed by plaintiffs to constitute an "INCIDENT." Thus,
20 KACC does not understand which particular INCIDENT is being
21 referred to by plaintiffs. As plaintiffs have not contended or
22 specifically designated how, if at all, KACC is related to any of
23 the identified work sites, KACC is uncertain as to how to respond
24 to this interrogatory. KACC cannot reasonably respond to this
25 interrogatory as the interrogatory is not directed towards any
26 particular time period, any work place, or any specific
27 occurrence alleged by plaintiffs, thus making it difficult and
28 confusing for KACC to determine whether it had any contact with a

1 particular worksite. It is plaintiffs' burden to provide this
2 type of information before KACC can reasonably be expected to
3 respond to this form interrogatory.

4 Subject to and without waiving any of these objections, KACC
5 responds to this interrogatory as follows: Yes; however, any
6 facts it has learned are all equally available to plaintiff as
7 they were produced as discovery in this action, including medical
8 records produced in this action. KACC is unaware of any other
9 facts outside this litigation at this time. KACC is continuing
10 its investigation regarding the cause of decedent's alleged
11 injuries.

12 **FORM INTERROGATORY NO. 16.2:**

13 Do you contend that plaintiff was not injured in the
14 INCIDENT? If so,

15 (a) state all facts upon which you base your contention;

16 (b) state the names, ADDRESSES, and telephone numbers of
17 all PERSONS who have knowledge of the facts;

18 (c) identify all DOCUMENTS and other tangible things that
19 support your contention and state the name, ADDRESS, and
20 telephone number of the PERSON who has each DOCUMENT or thing.

21 **RESPONSE TO FORM INTERROGATORY NO. 16.2:**

22 KACC incorporates its response to No. 16.1 as if fully
23 stated herein.

24 **FORM INTERROGATORY NO. 16.3:**

25 Do you contend that the injuries or the extent of the
26 injuries claimed by plaintiff as disclosed in discovery
27 proceedings thus far in this case were not caused by the
28 INCIDENT? If so, for each injury:

- 1 (a) identify it;
- 2 (b) state all facts upon which you base your contention;
- 3 (c) state the names, ADDRESSES, and telephone numbers of
- 4 all PERSONS who have knowledge of the facts;
- 5 (d) identify all DOCUMENTS and other tangible things that
- 6 support your contention and state the name, ADDRESS, and
- 7 telephone number of the PERSON who has each DOCUMENT or thing.

8 **RESPONSE TO FORM INTERROGATORY NO. 16.3:**

9 KACC incorporates its response to No. 16.1 as if fully

10 stated herein.

11 **FORM INTERROGATORY NO. 16.4:**

12 Do you contend that any of the services furnished by any

13 HEALTH CARE PROVIDER claimed by plaintiff in discovery

14 proceedings thus far in this case were not due to the INCIDENT?

15 If so:

- 16 (a) identify each service;
- 17 (b) state all facts upon which you base your contention;
- 18 (c) state the names, ADDRESSES, and telephone numbers of
- 19 all PERSONS who have knowledge of the facts;
- 20 (d) identify all DOCUMENTS and other tangible things that
- 21 support your contention and state the name, ADDRESS, and
- 22 telephone number of the PERSON who has each DOCUMENT or thing.

23 **RESPONSE TO FORM INTERROGATORY NO. 16.4:**

24 KACC incorporates its response to No. 16.1 as if fully

25 stated herein.

26 **FORM INTERROGATORY NO. 16.5:**

27 Do you contend that any of the costs of services furnished

28 by any HEALTH CARE PROVIDER claimed as damages by plaintiff in

1 discovery proceedings thus far in this case were unreasonable?

2 If so:

3 (a) identify each cost;

4 (b) state all facts upon which you base your contention:

5 (c) state the names, ADDRESSED, and telephone numbers of
6 all PERSONS who have knowledge of the facts;

7 (d) identify all DOCUMENTS and other tangible things that
8 support your contention and state the name, ADDRESS, and
9 telephone number of the PERSON who has each DOCUMENT or thing.

10 **RESPONSE TO FORM INTERROGATORY NO. 16.5:**

11 KACC incorporates its response to No. 16.1 as if fully
12 stated herein.

13 **FORM INTERROGATORY NO. 16.6**

14 Do you contend that any part of the loss of earning or
15 income claimed by plaintiff in discovery proceedings thus far in
16 this case was unreasonable or was not caused by the INCIDENT? If
17 so:

18 (a) identify each part of the loss;

19 (b) state all facts upon which you base your contention;

20 (c) state the names, ADDRESSES, and telephone numbers of
21 all PERSONS who have knowledge of the facts;

22 (d) identify all DOCUMENTS and other tangible things that
23 support your contention and state the name, ADDRESS, and
24 telephone number of the PERSON who has each DOCUMENT or thing.

25 **RESPONSE TO FORM INTERROGATORY NO. 16.6:**

26 KACC incorporates its response to No. 16.1 as if fully
27 stated herein.

28 **FORM INTERROGATORY NO. 16.7:**

1
2 **RESPONSE TO FORM INTERROGATORY NO. 16.7:**

3 KACC objects to this interrogatory on the grounds that the
4 term "incident" as defined by plaintiff is vague and ambiguous,
5 and overbroad in that it includes alleged exposure to asbestos
6 over a period of some forty years without specifying the location
7 and time periods of the alleged exposure. Subject to and without
8 waiving its objections, KACC responds that discovery into the
9 economic loss aspects of this
10 case, is not complete. At this time, KACC lacks sufficient
11 information to respond to this interrogatory. Discovery is
12 continuing.

13 **FORM INTERROGATORY NO. 16.8**

14 Do you contend that any of the costs of repairing the
15 property damage claimed by plaintiff in discovery proceedings
16 thus far in this case were unreasonable? If so:

17 (a) identify each cost item;

18
19 (b) state all of the facts upon which you base your
20 contention;

21 (c) state the names, ADDRESSES, and telephone numbers of all
22 PERSONS who have knowledge of the facts;

23
24 (d) identify all DOCUMENTS and other tangible things that
25 support your contention and state the name, ADDRESS, and
26 telephone number of the PERSON who has the DOCUMENT or
27 thing.

1 **RESPONSE TO FORM INTERROGATORY NO. 16.8:**

2 Not applicable.

3 **FORM INTERROGATORY NO. 16.9:**

4 Do YOU OR ANYONE ACTING ON YOUR BEHALF have any DOCUMENT
5 (for example, insurance bureau index reports) concerning claims
6 for personal injuries made before or after the INCIDENT by a
7 plaintiff in this case? If so, for each plaintiff state:

8 (a) the source of each DOCUMENT;

9 (b) the date each claim arose;

10 (c) the nature of each claim;

11 (d) the name, ADDRESS, and telephone number of the PERSON
12 who has each DOCUMENT.

13 **RESPONSE TO FORM INTERROGATORY NO. 16.9:**

14 KACC objects to this interrogatory as being vague, ambiguous
15 and confusing as the personal injuries of plaintiffs are not at
16 issue here.

17 Subject to and without waiving any of these objections, KACC
18 responds to this interrogatory as follows: KACC has only those
19 documents which plaintiff has produced in discovery, or that have
20 been obtained by Berry & Berry.

21 **FORM INTERROGATORY NO. 16.10:**

22 Do YOU OR ANYONE ACTING ON YOUR BEHALF have any DOCUMENT
23 concerning the past or present physical, mental, or emotional
24 condition of any plaintiff in this case from a HEALTH CARE
25 PROVIDER not previously identified (except for expert witnesses
26 covered by Code of Civil Procedure §2034)? If so, for each
27 plaintiff state:
28

1 (a) the name, ADDRESS, and telephone number of each HEALTH
2 CARE PROVIDER:

3 (b) a description of each DOCUMENT;

4 (c) the name, ADDRESS, and telephone number of the PERSON
5 who has each DOCUMENT.

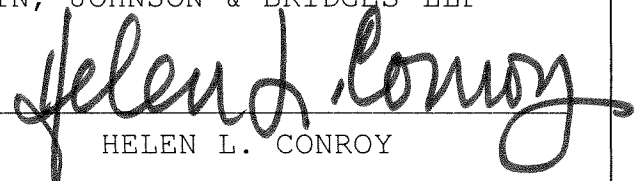
6 **RESPONSE TO FORM INTERROGATORY NO. 16.10:**

7 KACC objects to this interrogatory as being vague, ambiguous
8 and confusing as the health condition of the plaintiffs are not
9 at issue here.

10 Subject to and without waiving any of these objections, KACC
11 responds to this interrogatory as follows: KACC has only those
12 medical records secured by defense coordinating counsel in this
13 action.

14
15 Dated: June 24, 1998 THELEN, MARRIN, JOHNSON & BRIDGES LLP

16
17 By _____



HELEN L. CONROY

Attorneys for Defendant

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VERIFICATION

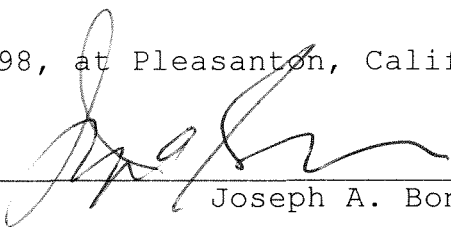
COUNTY OF SAN FRANCISCO)
) SS
STATE OF CALIFORNIA)

I, Joseph A. Bonn, am Vice President of Kaiser Aluminum & Chemical Corporation, and am duly authorized to execute this Verification, under oath and on behalf of Kaiser Aluminum & Chemical Corporation. I have read the foregoing Defendant Kaiser Aluminum & Chemical Corporation's Responses To Plaintiff's First Set of Form Interrogatories in John H. Montano v. Raybestos-Manhattan, et al. SFSC #980906, and am informed and believe, and on that basis state, that the matters contained therein are true.

The information set forth in these answers was collected by corporate personnel and other persons with knowledge of the facts; such information is not necessarily within my personal knowledge. However, on behalf of the corporation, I solemnly affirm, under the penalties of perjury, that the foregoing answers are true and accurate to the best of my knowledge, information, and belief.

I declare under penalty of perjury that the foregoing is true and correct.

Executed JUNE 23, 1998, at Pleasanton, California.



Joseph A. Bonn

PROOF OF SERVICE

CASE: John H. Montano, et al., v. Raybestos Manhattan, Inc. et al.
SFSC#: 992450

I, **Brendan Hallett**, am employed in the City and County of San Francisco, California, am over the age of eighteen years and not a party to the within action, and my business address is Two Embarcadero Center, Suite 1223, San Francisco, California 94111. On **June 25, 1998**, I served the following document(s):

**DEFENDANT KAISER ALUMINUM & CHEMICAL CORPORATION'S RESPONSES
TO PLAINTIFF'S FIRST SET OF FORM INTERROGATORIES**

on the parties listed through their attorneys of record, by placing true copies thereof in sealed envelopes addressed and designated for service as listed below:

XX By First Class Mail - I caused each such envelope, with first-class postage thereon fully prepaid, to be deposited in a recognized place of deposit of the U.S. Mail in San Francisco, California, for collection and mailing to the office of the addressee on the date shown herein following ordinary business practices.

 By Personal Service - I caused each such envelope to be delivered to a courier employed by this law firm, with whom we have a direct billing account, who personally delivered each such envelope to the office of the addressee on the date last written below.

 By Hand - I personally hand delivered such envelope to the office of the addressee on the date listed below.

ADDRESSEE:

WARTNICK, CHABER, HAROWITZ,
SMITH & TIGERMAN
101 California Street, 22nd Floor
San Francisco, CA 94111

I declare under penalty of perjury that the foregoing is true and correct. Executed **June 25, 1998**, at San Francisco, California.



Brendan Hallett

1 JENNIFER A. KUENSTER, State Bar No. 104607
2 **THELEN, MARRIN, JOHNSON & BRIDGES LLP**
3 Two Embarcadero Center, Suite 2100
4 San Francisco, California 94111
5 Telephone: (415) 392-6320

6 Attorneys for Defendant
7 **KAISER ALUMINUM & CHEMICAL CORPORATION**

RECEIVED

JUN 20 1997

WARTNICK LAW FIRM

8 SUPERIOR COURT OF THE STATE OF CALIFORNIA

9 IN AND FOR THE COUNTY OF SAN FRANCISCO

10
11
12
13
14 IN RE:

15
16 COMPLEX ASBESTOS LITIGATION

NO. 828684

17 KAISER ALUMINUM & CHEMICAL
18 CORPORATION'S RESPONSES TO
19 PLAINTIFFS' STANDARD
20 INTERROGATORIES TO ALL
21 DEFENDANTS PURSUANT TO
22 GENERAL ORDER 129

23 RESPONSES TO INTERROGATORIES

24 INTERROGATORY NO. 1:

25 IDENTIFY the person verifying these answers on YOUR behalf.

26 RESPONSE TO INTERROGATORY NO. 1:

27 Joseph A. Bonn
Kaiser Aluminum & Chemical Corporation
6177 Sunol Boulevard
Pleasanton, CA 94566-7769

1 INTERROGATORY NO. 2:

2 State the date of first employment with YOU, and the
3 dates and titles of each job position the person verifying
4 these interrogatories has held while employed by YOU.

5 RESPONSE TO INTERROGATORY NO. 2:

6 1967; various financial, supervisory and planning
7 positions; currently Vice President, Planning and Development.

8 INTERROGATORY NO. 3:

9 State whether or not YOU are a corporation, and if
10 so, state:

11 A. YOUR correct corporate name;

12 B. YOUR state of incorporation;

13 C. The date of YOUR incorporation;

14 D. The address of YOUR principal place of
15 business;

16 E. Whether or not YOU have ever held a certificate
17 of authority to do business in the State of California, and if
18 so, the inclusive dates of any certificate;

19 F. If YOU are wholly owned or the majority
20 interest of YOUR company is owned by another business entity,
21 state the entity's name and principal place of business;

22 G. Whether YOU have any business offices in
23 California, and, if so, YOUR principal place of business in
24 California.

25 RESPONSE TO INTERROGATORY NO. 3:

26 A. Kaiser Aluminum & Chemical Corporation.

27 B. Delaware.

1 C. December 9, 1940.

2 D. 6177 Sunol Boulevard, Pleasanton, CA 94566.

3 E. Yes. At all times since December 9, 1940.

4 F. Kaiser Aluminum Corporation, 5847 San Felipe,
5 Houston, Texas 77257.

6 G. Yes. 6177 Sunol Boulevard, Pleasanton, CA
7 94566.

8 INTERROGATORY NO. 4:

9 Have YOU ever been identified, known, or done business
10 under any other name in the State of California?

11 RESPONSE TO INTERROGATORY NO. 4:

12 Yes.

13 INTERROGATORY NO. 5:

14 If your answer to Interrogatory No. 4 is in the
15 affirmative, please state such name or names and the time
16 period during which THIS DEFENDANT was so known or identified.

17 RESPONSE TO INTERROGATORY NO. 5:

18 Todd Shipbuilding Corporation was incorporated in
19 Delaware on December 9, 1940. On November 8, 1941 the
20 corporation name was changed to The Permanente Metals
21 Corporation. On November 28, 1949 the corporation name was
22 changed to Kaiser Aluminum & Chemical Corporation.

23 INTERROGATORY NO. 6:

24 If YOU are not a corporation, what is YOUR business
25 structure (partnership, joint venture, sole proprietorship,
26 etc.).

27 ///

1 RESPONSE TO INTERROGATORY NO. 6:

2 Not applicable.

3 INTERROGATORY NO. 7:

4 If YOU are not a corporation, please IDENTIFY all persons
5 or other entities with an ownership interest in YOU.

6 RESPONSE TO INTERROGATORY NO. 7:

7 Not applicable.

8 INTERROGATORY NO. 8:

9 If you are not a corporation, please state the following:

10 A. The address where the HISTORICAL RECORDS of
11 THIS DEFENDANT are currently located; and

12 B. The name, job title and current address of the
13 Custodian for THIS DEFENDANT'S HISTORICAL RECORDS.

14 As used herein, "HISTORICAL RECORDS" shall include all
15 DOCUMENTS relating to the formation of THIS DEFENDANT, all
16 minutes of partners', general partners', or other owners'
17 meetings, and all DOCUMENTS relating to THIS DEFENDANT'S
18 merger with, acquisition of or purchase, or sale of or by any
19 other COMPANY.

20 RESPONSE TO INTERROGATORY NO. 8:

21 Not applicable.

22 INTERROGATORY NO. 9:

23 IDENTIFY YOUR custodian of Business Records.

24 RESPONSE TO INTERROGATORY NO. 9:

25 A request for corporate records can be addressed to
26 counsel for Kaiser Aluminum.

27 ///

1 INTERROGATORY NO. 10:

2 IDENTIFY the person or persons most knowledgeable about:

3 A. YOUR acquisition of RAW ASBESTOS and/or
4 ASBESTOS CONTAINING PRODUCTS;

5 B. YOUR use of RAW ASBESTOS and/or ASBESTOS
6 CONTAINING PRODUCTS;

7 C. YOUR contracting with others to do work
8 involving use or handling of RAW ASBESTOS or ASBESTOS
9 CONTAINING PRODUCTS.

10 RESPONSE TO INTERROGATORY NO. 10:

11 Mr. William E. Boyd, former products manager for
12 Kaiser Refractories, is believed to be the person most
13 knowledgeable about those relatively few products that were
14 made or sold by the former Kaiser Refractories Division with
15 any asbestos content. Kaiser Aluminum is not aware of the
16 identity of those persons generally most knowledgeable
17 concerning the other matters referenced in this Interrogatory.

18 INTERROGATORY NO. 11:

19 For DEFENDANTS involved in the MARKETING of ASBESTOS-
20 CONTAINING PRODUCTS, state the IDENTITY of physicians, medical
21 directors and/or industrial hygienists employed by YOU during
22 the time frame or prior to the time YOU discontinued the
23 marketing of such products. All other DEFENDANTS need only
24 respond as to medical directors and/or industrial hygienists
25 or physicians employed in the area of employee health and
26 safety. PREMISES owners and domestic corporations need only
27 respond as to the United States.

1 **RESPONSE TO INTERROGATORY NO. 11:**

2 J.P. Hughes, M.D. was corporate Medical Director
3 from 1957-1982. N.H. Proctor, M.D. was Director of Medical
4 Programs from 1982-1984. Corporate hygienists, with
5 approximate dates of employment, were:

6 A.J. Trommerhausen (1947-1976)
7 R.J. Archer (1975-1984)
8 T.J. Walker (1968-1981)
9 R.E. Ewart (1976-1985)
10 L. Castaneda (1977-1982)

11 Last known addresses are included in Exhibit A.

12 **INTERROGATORY NO. 12:**

13 Has any employee of THIS DEFENDANT testified by
14 deposition or at trial on behalf of THIS DEFENDANT in a third-
15 party case, in which THIS DEFENDANT was a party, wherein the
16 plaintiff has alleged an asbestos-related injury? If so, for
17 each such third-party case (except that Premises Defendants
18 and Contractor Defendants need answer only with respect to
19 cases relating to sites within the GEOGRAPHIC AREA) please
20 state:

- 21 A. The caption and case number;
22 B. The court filing including state and county;
23 C. The date of deposition or trial testimony;
24 D. The name and address of plaintiffs counsel of
25 record;
26 E. The name and address of the court reporter.

27 **RESPONSE TO INTERROGATORY NO. 12:**

Yes. Exhibit B includes a listing of those persons

1 who have testified as employees on behalf of Kaiser Aluminum
2 in tort cases in which the plaintiff was seeking damages for
3 alleged injury from excessive exposure to respirable asbestos
4 fibers.

5 **INTERROGATORY NO. 13:**

6 For each of the following, please state whether, at any
7 time within the time frame or until such time as any defendant
8 which had been engaged in MARKETING RAW ASBESTOS or ASBESTOS-
9 CONTAINING PRODUCTS discontinued the MARKETING of such
10 products, THIS DEFENDANT was a member or paid dues for any
11 representative of THIS DEFENDANT (excluding faculty members of
12 educational institutions) to be a member of the following:

13 A. American Conference of Governmental Industrial
14 Hygienists;

15 B. American Industrial Hygiene Association;

16 C. American Petroleum Institute;

17 D. American Railroad Association;

18 E. Asbestos Cement Producers Association;

19 F. Asbestos Information Association (AIA) (please
20 answer through date of your answers);

21 G. Asbestos Information Association/North America
22 (AIA/NA) (please answer through date of your answers);

23 H. Asbestos Textile Institute (ATI);

24 I. Industrial Hygiene Foundation and/or Industrial
25 Health Foundation (IHF);

26 J. Industrial Mineral Insulation Manufacturers
27 Institute;

- 1 K. Magnesita Insulation Manufacturers' Association;
2 L. Magnesita Silica Insulation Manufacturers
3 Association;
4 M. Mineral Wool Institute;
5 N. National Insulation Manufacturers Association
6 (NIMA);
7 O. National Safety Council;
8 P. New York Academy of Sciences;
9 Q. Quebec Asbestos Mining Association (QAMA);
10 R. Refractories Institute;
11 S. Safe Building Alliance (please answer through
12 date of your answers);
13 T. Thermal Insulation Manufacturers Association
14 (TIMA);
15 U. U.S. Maritime Commission;
16 V. IDENTIFY any other organizations, associations
17 or groups of manufacturers, miners, distributors, importers,
18 labelers, suppliers, and/or sellers of ASBESTOS-CONTAINING
19 PRODUCTS of which THIS DEFENDANT was a member;
20 W. IDENTIFY any such representative of THIS
21 DEFENDANT.

22 **RESPONSE TO INTERROGATORY NO. 13:**

23 Corporate or individual memberships were held in the
24 American Industrial Hygiene Association (AIHA), the National
25 Safety Council (NSC), the Industrial Hygiene Foundation (IHF),
26 and The Refractories Institute (TRI). Kaiser Aluminum is not
27 aware of any corporate or sponsored memberships during the

1 time frame at issue in any of the other identified
2 organizations, or in any organization whose focus was the
3 mining or processing of asbestos or the manufacture or sale of
4 products that contained asbestos.

5 **INTERROGATORY NO. 14:**

6 For each organization, association or other entity
7 identified in YOUR Response to Interrogatory No. 13, please
8 state:

9 A. The dates during which THIS DEFENDANT was a
10 member;

11 B. The name(s) of any publication(s) received by
12 THIS DEFENDANT from such association or organization;

13 C. The name of any committee or subcommittee of
14 which THIS DEFENDANT was a member, and the dates of such
15 committee or subcommittee membership.

16 **RESPONSE TO INTERROGATORY NO. 14:**

17 A. Kaiser Aluminum believes that corporate or
18 individual memberships in the four organizations identified in
19 response to Interrogatory No. 13 were held for the period in
20 question as follows:

21 (1) AIHA - from sometime before 1960 through
22 1985

23 (2) NSC - from approximately 1960 to until at
24 least 1984

25 (3) IHF - from 1960 until 1966

26 (4) TRI - from approximately 1960 until at
27 least 1984

1 B.,C. Certain employee(s) of Kaiser Aluminum may
2 have received publications disseminated by these organizations
3 to their general membership. Kaiser Aluminum is not informed
4 as to the identity of publications actually received by
5 specific employees. Kaiser Aluminum is not reasonably able to
6 reconstruct actual committee participation in these
7 organizations by individual employees. However, it is aware
8 that James P. Hughes, M.D. was once on the Medical Committee
9 of the IHF, that H.K. Lambie participated in the Metals
10 Section of the NSC and that J.F. Knight, H.M. Nelson,
11 C.E. Lindsay and C.C. Smith were members of committees of TRI.
12 Further information in this regard may be available from the
13 organizations themselves.

14 **INTERROGATORY NO. 15:**

15 Had THIS DEFENDANT prior to 1973 received any DOCUMENTS
16 containing results or conclusions of any studies and/or tests
17 conducted by Bonsib for Standard Oil of New Jersey relating to
18 asbestos exposure in the workplace or the human health
19 consequences of exposure to asbestos? If so:

20 A. Either (1) attach all DOCUMENTS evidencing the
21 information sought in this Interrogatory and its subparts to
22 your answers to these Interrogatories, or (2) attach disks
23 containing such data, or (3) describe such DOCUMENTS with
24 sufficient particularity that they may be made the subject of
25 a request for production of documents.

26 B. State the date upon which THIS DEFENDANT first
27 received such DOCUMENTS;

1 C. State the IDENTITY of the custodian of such
2 DOCUMENTS.

3 D. This interrogatory does not apply to DOCUMENTS
4 contained in a library maintained by a DEFENDANT hospital or a
5 DEFENDANT's library providing access to the general public.

6 **RESPONSE TO INTERROGATORY NO. 15:**

7 After a diligent search and reasonable inquiry,
8 Kaiser Aluminum is not aware of having received any such
9 information prior to 1973.

10 **INTERROGATORY NO. 16:**

11 Had THIS DEFENDANT prior to 1973 received a copy or any
12 portion of any studies and/or tests conducted by any insurance
13 company, including but not limited to Metropolitan Life
14 Insurance Company and Aetna Insurance relating to asbestos
15 exposure in the workplace or the human health consequences of
16 exposure to asbestos? If so:

17 A. Either (1) attach all DOCUMENTS evidencing the
18 information sought in this Interrogatory and its subparts to
19 your answers to these Interrogatories, or (2) attach disks
20 containing such data, or (3) describe such DOCUMENTS with
21 sufficient particularity that they may be made the subject of
22 a request for production of documents.

23 B. State the date upon which THIS DEFENDANT first
24 received such DOCUMENTS;

25 C. State the IDENTITY of the custodian of such
26 DOCUMENTS.

27 D. This interrogatory does not apply to DOCUMENTS

1 contained in a library maintained by a DEFENDANT hospital or a
2 DEFENDANT's library providing access to the general public.

3 **RESPONSE TO INTERROGATORY NO. 16:**

4 After a diligent search and reasonable inquiry,
5 Kaiser Aluminum is not aware of having received any such
6 information prior to 1973.

7 **INTERROGATORY NO. 17:**

8 Had THIS DEFENDANT prior to 1973 received any DOCUMENTS
9 containing results or conclusions of any studies and/or tests
10 conducted by any laboratory, including but not limited to, the
11 Saranac Laboratory relating to asbestos exposure in the
12 workplace or the human health consequences of exposure to
13 asbestos? If so:

14 A. Either (1) attach all DOCUMENTS evidencing the
15 information sought in this Interrogatory and its subparts to
16 your answers to these Interrogatories, or (2) attach disks
17 containing such data, or (3) describe such DOCUMENTS with
18 sufficient particularity that they may be made the subject of
19 a request for production of documents.

20 B. State the date upon which THIS DEFENDANT first
21 received such DOCUMENTS;

22 C. State the IDENTITY of the custodian of such
23 DOCUMENTS;

24 D. This interrogatory does not apply to DOCUMENTS
25 contained in a library maintained by a DEFENDANT hospital or a
26 DEFENDANT's library providing access to the general public.

27 ///

1 RESPONSE TO INTERROGATORY NO. 17:

2 Other than the results of air sampling in Kaiser
3 Aluminum plants, Kaiser Aluminum is not aware of having
4 received prior to 1973 any laboratory studies or tests, or
5 results thereof, that generally concerned asbestos.

6 INTERROGATORY NO. 18:

7 Had THIS DEFENDANT (except for a defendant that is an
8 educational institution) prior to 1973 ever maintained a
9 library (or libraries) which contained books, articles,
10 periodicals, journals, and/or reference materials that related
11 to the subjects of asbestos, industrial hygiene, medicine,
12 safety and/or occupational disease. If so, state:

- 13 A. The date each such library was established;
14 B. The location of each such library;
15 C. The IDENTITY of each librarian or other person
16 in charge of such library.

17 RESPONSE TO INTERROGATORY NO. 18:

18 Yes. At least from sometime in the 1960's through
19 1984, Kaiser Refractories maintained a collection of reference
20 materials related to the refractory industry, in particular
21 basic texts on ceramic engineering and associated topics in
22 engineering and refractory technology, in its offices in
23 Oakland, California. For most of its existence, the
24 collection had no particular custodian. It was generally
25 available for use by ceramic engineers, researchers and
26 executive employees at Kaiser Aluminum's Oakland headquarters.
27 P.J. Williams served as a librarian until sometime in 1983 and

1 V. Draney served as librarian during 1983-84. Kaiser Aluminum
2 does not believe that medical literature was maintained in
3 this library. Kaiser Aluminum stopped maintaining a library
4 or any recorded inventory at that library by the time it sold
5 its refractory operations at the end of 1984, and the
6 collection has been dispersed. Kaiser Aluminum also had a
7 research facility in Pleasanton, California, constructed in
8 the late 1960's, which may have contained some such
9 publications.

10 **INTERROGATORY NO. 19:**

11 With the exception of OSHA compliance, had THIS DEFENDANT
12 (except for a defendant that is an educational institution)
13 prior to 1980 exchanged DOCUMENTS or communicated with any
14 person or other COMPANY expressly regarding the results of
15 tests and/or studies relating to asbestos exposure in the
16 workplace or the human health consequences of exposure to
17 asbestos? If so, state:

18 A. Each person or COMPANY with whom the
19 information was exchanged or to whom it was communicated;

20 B. The date(s) of any such exchanges or
21 communications;

22 C. The IDENTITY of the custodian of such
23 DOCUMENTS.

24 **RESPONSE TO INTERROGATORY NO. 19:**

25 Kaiser Aluminum objects to this Interrogatory as
26 impermissibly requesting the disclosure of privileged
27 information to the extent it is intended to cover any receipt

1 of information which occurred in the course of defending
2 Kaiser Aluminum from a claim(s) for personal injury due to
3 exposure to respirable asbestos fibers. Subject to and
4 without waiving its objections, and after a diligent search
5 and reasonable inquiry, Kaiser Aluminum states that it has not
6 identified any exchange of information with another company or
7 entity prior to 1980 that specifically concerned the results
8 of scientific tests or studies regarding risks to health from
9 workplace exposure to excessive levels of respirable asbestos
10 fibers.

11 INTERROGATORY NO. 20:

12 Has any employee or designee of THIS DEFENDANT testified
13 as a representative of THIS DEFENDANT before the Occupational
14 Safety and Health Administration, the National Institute of
15 Occupational Safety and Health, or any committee or
16 subcommittee of the United States Congress relating to
17 asbestos exposure in the workplace or the human health
18 consequences of exposure to asbestos? If so, please state:

19 A. The entity before whom such testimony was
20 given;

21 B. The date(s) and location(s) of such testimony;

22 C. The IDENTITY of the individual(s) who so
23 testified;

24 D. Whether any DOCUMENTS were presented to the
25 entity before which testimony was given;

26 E. Whether copies of DOCUMENTS presented were
27 retained by THIS DEFENDANT and, if so, state the IDENTITY of

1 the custodian of such DOCUMENTS.

2 **RESPONSE TO INTERROGATORY NO. 20:**

3 After a diligent search and reasonable inquiry,
4 Kaiser Aluminum is not aware of any such testimony on its
5 behalf before any of the designated committees or agencies
6 during the period in question.

7 **INTERROGATORY NO. 21:**

8 Has THIS DEFENDANT (except for a defendant that is an
9 educational institution) conducted, or caused to be conducted,
10 tests, and/or studies of ambient asbestos dust created during
11 the manufacture, processing and/or assembling for sale of
12 ASBESTOS-CONTAINING PRODUCTS? If so, state:

13 A. Each manufacturing facility, including location
14 and address, at which any such test and/or study was
15 conducted;

16 B. The date of each such test and/or study;

17 C. The individual(s) or entity conducting each
18 such test and/or study;

19 D. Whether THIS DEFENDANT has any DOCUMENTS
20 containing the results and/or conclusions of each such study;

21 E. The IDENTITY of the custodian of such
22 DOCUMENTS.

23 **RESPONSE TO INTERROGATORY NO. 21:**

24 Kaiser Aluminum is aware that personnel from the
25 former Kaiser Refractories Division conducted air sampling for
26 respirable asbestos fibers at its Plymouth Meeting,
27 Pennsylvania plant. Kaiser Aluminum has located certain

1 documentation which refers to the results of this air sampling
2 as well as to the dates of the air sampling. This
3 documentation is being retained under the supervision of
4 counsel for Kaiser Aluminum and will be produced upon an
5 appropriate request.

6 **INTERROGATORY NO. 22:**

7 Has THIS DEFENDANT (except for a defendant that is an
8 educational institution) conducted, or caused to be conducted,
9 any tests and/or studies on ambient asbestos dust levels at
10 any location or job site where ASBESTOS-CONTAINING PRODUCTS
11 were installed, utilized or removed? If so, for the first 5
12 tests and/or studies, state:

13 A. The location, including name and address, at
14 which each such test and/or study was conducted;

15 B. The individual(s) or entity conducting each
16 such test and/or study;

17 C. The date of each such test and/or study;

18 D. Whether THIS DEFENDANT has any DOCUMENTS
19 containing the results and/or conclusions of each such test
20 and/or study;

21 E. The IDENTITY of the custodian of such
22 DOCUMENTS.

23 **RESPONSE TO INTERROGATORY NO. 22:**

24 Yes. However, after a diligent search and
25 reasonable inquiry, Kaiser Aluminum is unable to determine the
26 first five such tests and/or studies. The earliest documented
27 testing of this nature concerns air sampling for respirable

1 asbestos fibers at the Kaiser Aluminum Chalmette Works in
2 St. Bernard Parish, Louisiana. Documentation of the results
3 and dates of such testing is being retained under the
4 supervision of counsel for Kaiser Aluminum. It will be
5 produced upon an appropriate request.

6 **INTERROGATORY NO. 23:**

7 Did THIS DEFENDANT (except for a defendant that is an
8 educational institution) have any laboratory or other similar
9 type of facility anywhere in the United States at which it
10 conducted, or caused to be conducted, any tests and/or studies
11 of ASBESTOS-CONTAINING PRODUCTS or RAW ASBESTOS relating to
12 the health consequences of asbestos or the dust generated by
13 any use of asbestos or ASBESTOS-CONTAINING PRODUCTS. If so,
14 state:

15 A. The location, including name and address, at
16 which each test and/or study was conducted;

17 B. The individual(s) or entity conducting each
18 such test and/or study;

19 C. The date of each such test and/or study;

20 D. Whether THIS DEFENDANT has any DOCUMENTS
21 containing the results and/or conclusions of each such test
22 and/or study;

23 E. The IDENTITY of the custodian of such
24 DOCUMENTS.

25 **RESPONSE TO INTERROGATORY NO. 23:**

26 Kaiser Aluminum was never in the business of making
27 or selling products that contained asbestos and accordingly

1 did not engage in this type of scientific testing or studies.

2 **INTERROGATORY NO. 24:**

3 Has THIS DEFENDANT made available to its employees a
4 medical examination program to determine the absence or
5 presence of asbestos-related disease? If so, state:

6 A. Whether chest x-rays or pulmonary function
7 tests were part of such program(s);

8 B. Whether participation in any such program was a
9 mandatory condition of employment or was voluntary;

10 C. Whether THIS DEFENDANT has DOCUMENTS of such
11 program(s);

12 D. The IDENTITY of the custodian of such
13 DOCUMENTS.

14 **RESPONSE TO INTERROGATORY NO. 24:**

15 Kaiser Aluminum made available at various of its
16 plants medical examinations designed to detect the presence of
17 pulmonary disease or impairment. With respect to A - D Kaiser
18 Aluminum states:

19 A. Yes.

20 B. Kaiser Aluminum is not aware that any plant
21 program required x-rays or pulmonary function tests as a
22 condition of employment.

23 C. Kaiser Aluminum has documentation of corporate
24 guidelines for types of medical examination recommended in the
25 instance of a certain level of asbestos exposure.

26 D. The guidelines have been retained under
27 supervision of counsel for Kaiser Aluminum and are available

1 upon an appropriate request.

2 **INTERROGATORY NO. 25:**

3 Prior to 1973, did any person file a Workers'
4 Compensation claim for asbestos-related injury against THIS
5 DEFENDANT or against any Workers' Compensation insurance
6 carrier which provided coverage for THIS DEFENDANT? If so,
7 state the total number of such claims and, for the first 20
8 such claims state:

- 9 A. The date of such claim;
10 B. The name of the claimant;
11 C. The case number;
12 D. The court in which the claim was filed;
13 E. The IDENTITY of THIS DEFENDANT's custodian of
14 DOCUMENTS evidencing such claims.

15 **RESPONSE TO INTERROGATORY NO. 25:**

16 After a diligent search and reasonable inquiry,
17 Kaiser Aluminum is not aware of any workers' compensation
18 claim asserted against it prior to 1973 for injury alleged to
19 have been caused by excessive exposure to respirable asbestos
20 fibers.

21 **INTERROGATORY NO. 26:**

22 Does THIS DEFENDANT have insurance available to cover
23 judgment(s) entered against it in asbestos-related personal
24 injury lawsuits? If so, state:

- 25 A. The name and principal place of business of any
26 insurance carrier who has issued such policy of insurance;
27 B. The number and effective date of each policy;

1 C. The amount(s) of coverage of each policy;

2 D. The applicable dates of coverage.

3 RESPONSE TO INTERROGATORY NO. 26:

4 Yes. Kaiser Aluminum responds to this Interrogatory
5 by stating that at least the following policies of insurance
6 have been issued to it for the periods indicated:

7
8 Carrier: Lloyd's
9 Policy #: LC 41127
10 Policy Period: 10/15/45 - 10/15/48

11 Carrier: Lloyd's
12 Policy #: LC 50271
13 Policy Period: 10/15/48 - 10/15/51

14 Carrier: Lloyd's
15 Policy #: LC 50280
16 Policy Period: 10/19/48 - 10/19/51

17 Carrier: Lloyd's
18 Policy #: LL 38905
19 Policy Period: 10/15/51 - 10/15/54

20 Carrier: Lloyd's
21 Policy #: LL 38906
22 Policy Period: 10/15/51 - 10/15/54

23 Carrier: Lloyd's
24 Policy #: LL 55611
25 Policy Period: 10/14/54 - 10/15/57

26 Carrier: Lloyd's
27 Policy #: LC 51369
Policy Period: 03/03/50 - 03/03/59

Carrier: Fireman's Fund Insurance Company
Policy #: XAC 115695
Policy Period: 12/31/47 - 4/1/50

1	Carrier:	Fireman's Fund Insurance Company
2	Policy #:	XAC 135553
3	Policy Period:	4/1/50 - 4/1/53
4	Carrier:	Fireman's Fund Insurance Company
5	Policy #:	XAC 152458
6	Policy Period:	4/1/53 - 4/1/54
7	Carrier:	Fireman's Fund Insurance Company
8	Policy #:	XAC 159347
9	Policy Period:	4/1/54 - 5/29/55
10	Carrier:	Fireman's Fund Insurance Company
11	Policy #:	GAC 103118
12	Policy Period:	5/29/55 - 5/29/57
13	Carrier:	Fireman's Fund Insurance Company
14	Policy #:	GAC 104027
15	Policy Period:	5/29/57 - 1/1/58
16	Carrier:	Fireman's Fund Insurance Company
17	Policy #:	GAC 104099
18	Policy Period:	1/1/58 - 1/1/59
19	Carrier:	Fireman's Fund Insurance Company
20	Policy #:	GAC 104129
21	Policy Period:	1/1/59 - 1/1/60
22	Carrier:	Fireman's Fund Insurance Company
23	Policy #:	CL7 12111
24	Policy Period:	1/1/60 - 4/1/60
25	Carrier:	Insurance Company of North America
26	Policy #:	XCP 602
27	Policy Period:	4/1/60 - 1/1/63
28	Carrier:	Insurance Company of North America
29	Policy #:	XCP 915
30	Policy Period:	1/1/63 - 1/1/64
31	Carrier:	Insurance Company of North America
32	Policy #:	XBC 4354
33	Policy Period:	1/1/64 - 1/1/67

1 Carrier: Insurance Company of North America
2 Policy #: XBC 24315
3 Policy Period: 1/1/67 - 1/1/70
4 Carrier: Insurance Company of North America
5 Policy #: XBC 67901
6 Policy Period: 1/1/70 - 2/1/73
7 Carrier: Affiliated FM Insurance Company
8 Policy #: 71399
9 Policy Period: 2/1/73 - 4/1/76
10 Carrier: First State Insurance Company
11 Policy #: 902504
12 Policy Period: 4/1/76 - 4/1/77
13 Carrier: Central National Insurance Company
14 Policy #: CNU 126404
15 Policy Period: 4/1/77 - 4/1/78

13 INTERROGATORY NO. 27:

14 State whether YOU have controlled, purchased, or in any
15 way acquired any controlling interest in any corporation or
16 business entity which has mined, manufactured, produced,
17 processed, compounded, sold, supplied, distributed and/or
18 otherwise placed RAW ASBESTOS or ASBESTOS-CONTAINING PRODUCTS
19 in the stream of commerce. If so, state:

20 A. The name and address of said corporation or
21 business entity;

22 B. The dates YOU controlled, purchased or acquired
23 any interest; and

24 C. The nature of the business as it pertains to
25 asbestos.

26 RESPONSE TO INTERROGATORY NO. 27:

27 Yes.

1 A. Mexico Refractories Company of Mexico, Missouri
2 B. & C. The refractory operations of Mexico
3 Refractories were merged into Kaiser Aluminum effective on or
4 about May 31, 1959.

5 **INTERROGATORY NO. 28:**

6 State whether THIS DEFENDANT, between 1930 and 1985, has
7 ever engaged in the following activities with regard to RAW
8 ASBESTOS, and if so, state the inclusive dates of such
9 activity:

- 10 A. Mining;
- 11 B. Milling;
- 12 C. Supply;
- 13 D. Importing;
- 14 E. Processing;
- 15 F. Distribution;
- 16 G. Marketing;
- 17 H. Sale;
- 18 I. Brokering.

19 **RESPONSE TO INTERROGATORY NO. 28:**

20 A-I: No, except upon information and belief, a
21 former subsidiary of Kaiser Aluminum, Kaiser Trading Company,
22 once engaged in the purchase and/or sale of commodities, which
23 may have included asbestos fibers.

24 **INTERROGATORY NO. 29:**

25 If YOUR answer to any of subparts of Interrogatory 28
26 regarding RAW ASBESTOS is in the affirmative, state:

- 27 A. The trade, brand name, and/or generic name of

1 such RAW ASBESTOS milled or MARKETED in any form or quantity
2 between 1930 and 1985;

3 B. The date(s) such RAW ASBESTOS was first placed
4 on the market, including the date(s) such RAW ASBESTOS was
5 first marketed;

6 1. On an experimental basis;

7 2. On a test basis;

8 3. For sale.

9 C. The date(s) such RAW ASBESTOS:

10 1. Ceased to be produced; or

11 2. Was recalled from the market, if ever.

12 D. A description of the chemical composition of
13 such RAW ASBESTOS, including the type and/or grade of
14 asbestos;

15 E. A description of the physical appearance and
16 nature of such RAW ASBESTOS, including any color coding,
17 distinctive marking and/or logo on the packaging or container;

18 F. A detailed description of the intended use of
19 such RAW ASBESTOS, including any temperature limits for each
20 such use;

21 G. Whether such RAW ASBESTOS was on the U.S.
22 Government's "Qualified Products List," and if so, the
23 inclusive dates it was on such list;

24 H. IDENTIFY to whom such RAW ASBESTOS has, at any
25 time, been sold. As to each such, state:

26 I. Whether any of THIS DEFENDANT'S RAW ASBESTOS
27 has, at any time, been sold, shipped, or otherwise

1 distributed, used or installed to or at any COMPANY (including
2 power company or utility), governmental agency or entity,
3 shipyard, distributor, refinery, contractor, supplier, PREMISE
4 owner or occupant, ship owner, or other PREMISE or site in the
5 GEOGRAPHIC AREA and whether any of THIS DEFENDANT'S RAW
6 ASBESTOS has at any time, been sold to any manufacturer, or
7 manufacturing facility, of ASBESTOS-CONTAINING PRODUCTS. If
8 so, state:

9 1. The names of each such COMPANY,
10 governmental agency or entity, shipyard, distributor,
11 supplier, manufacturer or refinery;

12 2. The inclusive dates of each such sale, and
13 the amount (quantity) and the trade brand name of such RAW
14 ASBESTOS sold;

15 3. The manner of shipment (e.g. boat, rail,
16 etc.).

17 4. Whether you have any records indicating
18 any such sale or shipment and, if so, the name, address and
19 job classification of each person who currently has possession
20 of such records.

21 5. Either (1) attach all DOCUMENTS evidencing
22 the information sought in this Interrogatory and its subparts
23 to your answers to these Interrogatories, or (2) attach disks
24 containing such data, or (3) describe such DOCUMENTS with
25 sufficient particularity that they may be made the subject of
26 a request for production of documents.

27 ///

1 RESPONSE TO INTERROGATORY NO. 29:

2 Kaiser Aluminum has insufficient information to
3 respond with respect to any purchase or sale of asbestos
4 fibers by the Kaiser Trading Company.

5 INTERROGATORY NO. 30:

6 Between 1930 and 1985, did YOU ever engage in any of the
7 activities listed below with regard to ASBESTOS-CONTAINING
8 PRODUCTS? If so, state the inclusive dates of such activity:

- 9 A. Supply;
10 B. Importing;
11 C. Distribution;
12 D. Marketing;
13 E. Sale;
14 F. Labeling;
15 G. Manufacturing;
16 H. Brokering.

17 RESPONSE TO INTERROGATORY NO. 30:

- 18 A. Yes. See Response to Interrogatory No. 31.
19 B. No.
20 C. Yes, to the extent "distribution" includes the
21 sale or supply of asbestos-containing products.
22 D. Yes. See Response to Interrogatory No. 31.
23 E. Yes. See Response to Interrogatory No. 31.
24 F. Yes. See Response to Interrogatory No. 31.
25 G. Yes. See Response to Interrogatory No. 31.
26 H. No.

27 ///

1 INTERROGATORY NO. 31:

2 If your answer to any subpart of Interrogatory No. 31
3 regarding "ASBESTOS-CONTAINING PRODUCTS" is in the
4 affirmative, state:

5 A. The trade, brand name, and/or generic name of
6 each such ASBESTOS-CONTAINING PRODUCT MARKETED in any form or
7 quantity between 1930 and 1985;

8 B. The date(s) each such ASBESTOS-CONTAINING
9 PRODUCT was first placed on the market, including the date(s)
10 each such ASBESTOS-CONTAINING PRODUCT was first MARKETED;

- 11 1. On an experimental basis;
12 2. On a test basis; or
13 3. For sale.

14 C. The date(s) each such ASBESTOS-CONTAINING
15 PRODUCT:

- 16 1. Ceased to be produced; or
17 2. Was recalled from the market, if ever.

18 D. A detailed description of the chemical
19 composition of each such ASBESTOS-CONTAINING PRODUCT,
20 including the type and/or grade of asbestos and/or asbestos
21 fiber contained in each such product and the quantitative
22 percentage of asbestos or asbestos fiber in each such product,
23 and all non-asbestos components of the ASBESTOS-CONTAINING
24 PRODUCT, and if the chemical composition changed over time,
25 the inclusive dates of each formulation;

26 E. A description of the physical appearance and
27 nature of each such ASBESTOS-CONTAINING PRODUCT, including any

1 color coding, distinctive marking and/or logo, either on the
2 product or on the packaging;

3 F. A detailed description of the intended use of
4 each such ASBESTOS-CONTAINING PRODUCT, including any
5 temperature limits for each such use;

6 G. Whether any such ASBESTOS-CONTAINING PRODUCT
7 was on the U.S. Government's "Qualified Products List," and if
8 so, the inclusive dates it was on such list;

9 H. The name and address of the supplier of the RAW
10 ASBESTOS used in each such product and the time period of such
11 supply;

12 I. Whether any of THIS DEFENDANT'S RAW ASBESTOS OR
13 ASBESTOS-CONTAINING PRODUCTS have, at any time, been sold,
14 shipped, or otherwise distributed to any COMPANY (including
15 power company or utility), governmental agency or entity,
16 shipyard, distributor, refinery, contractor, supplier,
17 manufacturer, PREMISE owner or occupant, ship owner, or other
18 PREMISE or site in the GEOGRAPHIC AREA. If so, state:

19 1. The names of each such COMPANY,
20 governmental agency or entity, shipyard, distributor,
21 supplier, manufacturer, refinery, contractor, PREMISE owner or
22 occupant, ship owner, PREMISE or site;

23 2. The inclusive dates of each such sale,
24 shipment, distribution, use or installation and the amount
25 (volume) and the trade or brand name of each such ASBESTOS-
26 CONTAINING PRODUCT sold;

27 3. Whether you have any records indicating

1 any such sale, shipment, distribution, use or installation
2 and, if so, the name, address and job classification of each
3 person who currently has possession of such records.

4 J. Either (1) attach all DOCUMENTS evidencing the
5 information sought in this Interrogatory and its subparts to
6 your answers to these Interrogatories, or (2) attach disks
7 containing such data, or (3) describe such DOCUMENTS with
8 sufficient particularity that they may be made the subject of
9 a request for production of documents.

10 **RESPONSE TO INTERROGATORY NO. 31:**

11 (A) - (F) Kaiser Aluminum was not in the business of
12 manufacturing, producing, or selling asbestos or
13 asbestos-containing insulation. Kaiser Aluminum never mined,
14 milled, or manufactured asbestos or asbestos-containing
15 insulation. Kaiser Aluminum supplied various refractory
16 products through its former Kaiser Refractories Division
17 ("K/R"). K/R's business was the manufacturing and supply of
18 refractory products for the production of iron, steel,
19 aluminum and other metals (also, for making glass, burning
20 clinker for cement, and other industrial uses where the lining
21 is subjected to high temperatures, to molten metal, to slag,
22 or to other high temperature corrosive actions).

23 K/R manufactured one asbestos-containing refractory
24 product for a short period of time. The product was a plastic
25 chrome ore, brand name "Plastic K-N" (with a variant form
26 known as Plastic K K-N). This was a dark-colored, wet, dense
27 (210 lbs/cu.ft.), pliable, moldable refractory. It was used

1 for special high temperature applications, in particular for
2 the lining of doors to open hearth furnaces for making steel.
3 This product was first manufactured by K/R on or after
4 February 28, 1974, subsequent to the purchase of certain
5 assets from Mallinckrodt Inc. (once known as International
6 Minerals & Chemical Corp.). Plastic K-N contained less than
7 one percent Canadian Standard 7M-90 chrysotile asbestos fibers
8 by weight. This wet product had a sodium silicate binder
9 which "glued" or "locked" the fibers in the refractory mix
10 and, consequently, Plastic K-N did not release respirable
11 asbestos fibers. In addition, after exposure to the high
12 temperature of furnace operations, the tiny chrysotile
13 asbestos content of Plastic K-N would have decomposed into a
14 non-asbestos material or would otherwise have become
15 encapsulated in a rock hard matrix of material. Plastic K-N
16 was packed in polyethylene lined 100 pound 5-ply paper bags,
17 100 pound cardboard cartons and 200 pound steel drums.
18 Plastic K-N was shipped by K/R and was received by its user in
19 a form ready for use as removed from its container and did not
20 require mixing prior to application.

21 The less than one percent by weight of chrysotile
22 asbestos fibers was reduced to less than 3/4 of one percent in
23 August 1975, and was completely eliminated from the mix by
24 approximately February 1977. Plastic K-N was made without any
25 asbestos content from approximately February 1977, until
26 Kaiser Aluminum removed itself from the refractory business at
27 the end of 1984.

1 K/R also fabricated a direct-bonded basic refractory
2 brick (K/R 1202), which was fired at a high temperature. The
3 brick, as all brick made by K/R, did not contain asbestos. As
4 a customer accommodation, K/R, upon customer specification,
5 supplied the 1202 brick with an asbestos-containing paper
6 after February 28, 1974. The metal casing was applied
7 completely covering the paper, which was on one or more sides
8 of the brick. The product was shipped on pallets. Sales of
9 this specially fabricated product were discontinued by May
10 1978. Kaiser Aluminum has confirmed sales of this specially
11 fabricated product to only one steel company, which prior to
12 the asset acquisition of February 28, 1974, had specified that
13 asbestos-containing paper be included between the brick and
14 its casing on one or more sides in order to provide expansion
15 relief as furnaces were fired to operating temperatures.
16 Kaiser Aluminum is not aware of any sales of the 1202 brick
17 with any asbestos-containing paper within the "GEOGRAPHIC
18 AREA".

19 K/R also supplied an asbestos-containing paper with
20 some shipments of a metal cased refractory brick known as
21 Coalex 60 Unitab Liners. This product was sold primarily, if
22 not exclusively, to several cement industry customers for use
23 in the interior burn areas of rotary kilns. Kaiser Aluminum
24 believes that any use of paper with the product was commenced
25 in the mid-to-late 1960's and terminated by the early 1970's.
26 The paper was not made by K/R but was obtained from
27 independent sources and supplied in connection with certain

1 orders for Coelex 60 Unitab Liners. Kaiser Aluminum has
2 insufficient information at this point to determine what, if
3 any, sales of the Unitab Liners with this paper occurred
4 within the "GEOGRAPHIC AREA."

5 Kaiser Aluminum also fabricated a building material
6 which was distributed under the Mirawal name. Certain Mirawal
7 building panels included an asbestos-cement board laminated on
8 both sides by steel sheets or by rock aggregate on one side
9 and steel sheet on the other. The area on each sheet of
10 exposed core was only the one-eighth inch perimeter.

11 Installation of the product involved glazing it into a frame,
12 and once installed the core board was completely encapsulated.

13 This product was first fabricated by Kaiser Aluminum on or
14 after April 24, 1968 subsequent to the purchase of certain
15 assets of Birdsboro Corporation. These assets were sold to
16 Glasweld International Inc. on or about April 14, 1977.

17 Kaiser has insufficient information at this time to determine
18 what, if any, sales of Mirawal building panels with an
19 asbestos-cement board occurred within the "GEOGRAPHIC AREA."

20 Mexico Refractories Company ("Mexico"), as an
21 accommodation to some of its refractory customers, purchased
22 some insulation products, which upon infrequent occasion were
23 included in small quantities with refractory shipments to
24 these particular customers. These materials were used as
25 expansion joints or back-up insulation for some of the
26 customers' refractory linings. The products were never
27 manufactured by Mexico or K/R, but by others, and were

1 rebranded and packaged by others. These products are
2 identified below with information Kaiser Aluminum has obtained
3 from suppliers regarding their manufacturers and their names
4 as sold by these manufacturers:

5 K/R Brand Name: K/R M-Block Insulation

6 Manufacturer's brand name:

7 Approximately 1939-1964 M.H. Detrick
8 Co./Griptex;

9 1964-1970 Refractories & Insulation
10 Corp./Griptex;

11 1970-1974 C-E Refractories Division/R&I Griptex
12 Block;

13 1974-1984 Keene Corp./Mono Block (Keene sold
14 its insulation operation to Fibrex, Inc.
15 in 1984)

16 First sold by KACC on or after May 31, 1959.
17 Asbestos removed by June 1972.

18 Product was sold asbestos-free by K/R by and
19 after June 1972 until December 31, 1984.

20 The product was packaged in cartons.

21 K/R Brand Name: K/R Hard-Top Finishing Cement

22 Manufacturer's brand name:

23 Approximately 1956-until 1964 M.H. Detrick
24 Co./Utility Thermal Finish Cement;

25 1964-1970 Refractories & Insulation Corp./R&I
26 Finishing Cement;

27 1970-1974 C-E Refractories Division/Finishing
Cement;

1974-December 31, 1984 Keene Corp./Super Power
House Insulating Cement (Keene sold its
insulation operations in 1984 to Fibrex,
Inc.)

First sold by K/R on or after May 31, 1959.
Asbestos removed by June 1972.

Product was sold asbestos-free by K/R by and
after June 1972 until December 31, 1984.

The product was packaged in bags.

K/R Brand Name: K/R Plastic Insulation

Manufacturer's brand name:

1 Approximately 1956 to 1964 M.H. Detrick Co./711
Insulating Cement;

2 1970-1974 Refractories & Insulation Corp./R&I
711 Cement;

3 1970-1974 C-E Refractories Division/711 Cement;

4 1974-December 31, 1984 Keene Corp./Super 1900
Insulating Cement (Keene sold its
5 insulation operations in 1984 to Fiberex,
Inc.)

6 First sold K/R sometime on or after May 31,
1959.

7 Asbestos was removed by June 1972.

8 Product was sold asbestos-free by K/R by and
after June 1972 until December 31, 1984.

9 The product was packaged in bags.

10 K/R Brand Name: K/R Vee Block Insulation (name was
11 changed to V-18 Block Insulation in 1971)

12 Manufacturer's brand name:

13 International Vermiculite Co./IV-18 Block
Insulation (International Vermiculite was
14 sold in 1984 to Morgan Refractories, Inc.,
subsidiary of Morgan Crucible Co. U.K. and
operated as Thermic Refractories.)

15 First sold by K/R on or after May 31, 1959.

16 Mid-1974 this product was dropped by K/R
and replaced with V-19-AF, an asbestos-
free block.

17 V-19-AF was sold by K/R from mid-1974 until
18 December 31, 1984.

19 The product was packaged in cartons.

20 K/R Brand Name: K/R Vee block Mix

21 Manufacturer's brand name:

22 International Vermiculite Co./IV-18 Block Mix
(International Vermiculite was sold in
23 1984 to Morgan Refractories, Inc.,
subsidiary of Morgan Crucible Co. U.K. and
operated as Thermic Refractories.)

24 First sold by K/R on or after May 31, 1959.

25 Asbestos removed by 4th quarter of 1974.

26 Product was sold asbestos-free by K/R by and
from fourth quarter of 1974 to December
31, 1984.

27 The product was packaged in bags.

1 K/R Brand Name: K/R Super D Block Insulation
2 Manufacturer's brand name:

3 International Vermiculite Co./IV-20 Block
4 Insulation (International Vermiculite was
5 sold in 1984 to Morgan Refractories, Inc.
6 subsidiary of Morgan Crucible Co. U.K. and
7 operated as Thermic Refractories.)

8 First sold by K/R in August 1971.

9 Asbestos removed by mid-year 1974.

10 Super D Block Insulation was sold asbestos-free
11 by K/R from mid-1974 to December 31, 1984.

12 The product was packaged in cartons.

13 The six insulation products listed above were not
14 manufactured by K/R. Certain K/R personnel knew that K/R
15 M-Block Insulation, K/R Hard-Top Finishing Cement, and K/R
16 Plastic Insulation were made with a mineral wool fiber base;
17 however, they did not know the mix of ingredients. Nor did
18 K/R personnel know the mix of ingredients of the other
19 insulation products which were made by International
20 Vermiculite. Certain personnel at K/R learned of the asbestos
21 content of these rebranded insulation products at some point
22 after K/R began selling them, but Kaiser Aluminum is not able
23 to state when this first occurred.

24 Based upon information obtained through suppliers,
25 Kaiser Aluminum believes that the asbestos content of the
26 rebranded insulation products was as follows:

<u>Product</u>	<u>Content by Weight</u>	<u>Type</u>
K/R V-18 Block Insulation (Vee Block Insulation)	7.0%	Amosite

1	K/R Vee Block Mix	10.4%	Chrysotile
2	K/R Super D Block	6.5%	Amosite
	K/R M-Block Insulation	2.0%	Chrysotile
3	K/R Hard-Top Finishing Cement	4.75%	Chrysotile
4	K/R Plastic Insulation	13.7%	Chrysotile

5

6 (G) Kaiser Aluminum believes that none of the

7 rebranded insulation products which it sold were on the

8 government's Qualified Products List. Of the other products

9 listed, Kaiser Aluminum is aware only that K/R Plastic K-N was

10 for a period of time on the Qualified Products List. Kaiser

11 Aluminum reserves the right to file a supplementary response

12 to Interrogatory No. 31(G) when, and if, additional

13 information becomes available.

14 (H) Kaiser Aluminum has insufficient information to

15 specify with any degree of confidence who supplied the raw

16 asbestos fibers utilized in K/R Plastic K-N. Kaiser Aluminum

17 does not know the suppliers of raw asbestos fibers for any

18 other asbestos-containing products it sold since it obtained

19 these from others, except that it believes that Nicolet was

20 the supplier of the paper containing chrysotile asbestos that

21 was used between the K/R 1202 brick and the metal casing for

22 expansion purposes. See Answer to Interrogatory No. 31(A) -

23 (F).

24 (I) Yes. Based upon available records, Kaiser

25 Aluminum states that it is aware of the following sales (in

26 dollars) of products in the GEOGRAPHIC AREA during years when

27 the products contained asbestos:

1
2 Product Sales (in dollars) In The Defined Geographic Area

3 Product: K/R Plastic Insulation

	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972*</u>
5 W.E. Mushet Co.	\$0	\$46	\$20	\$0
6 J.T. Thorpe & Sons	0	121	73	17
7 ABEX Corporation	0	0	136	0
8 Gallo Glass	0	194	227	1487
9 Kaiser Cement & Gypsum	63	61	0	0

10 Product: K/R M-Block Insulation

11 American Smelting & Refining	0	75	0	0
12 ABEX Corporation	0	0	14	0
13 W.E. Mushet Co.	56	199	439	0
14 J.T. Thorpe & Son	1998	1098	93	1179
15 Envirotech	0	0	0	3145
16 Kaiser Cement & Gypsum (through J.T. Thorpe & Sons)	1253	0	512	0
17 Kaiser Aluminum & Chemical Corporation	112	87	383	14

19 * Products above were asbestos-free by June 1972.

20 Product: K/R Vee Block Insulation/V-18 Block Insulation

21 ABEX Corporation	0	0	149	21
22 Envirotech	0	0	0	85
23 Heat & Control, Inc.	15,537	14,901	3417	2931
24 W.E. Mushet Co.	34	0	0	0

Product: K/R Vee Block Mix

1					
2	Kaiser Aluminum &	0	0	0	27
	Chemical				
3	Gallo Glass Co.	0	0	0	1011
	Glass Containers	0	850	1733	0
4	Heat & Control,	280	0	0	28
	Inc.				
5	Marlsbury	211	0	0	0
6	Manufacturing Co.				
7	J.T. Thorpe & Sons	137	0	0	117
	Envirotech	0	0	1588	0

Product: K/R Super D Block Insulation

There were no sales of this product.

Product: K/R Hard-Top Finishing Cement

Kaiser Aluminum has no records of any sales of this product.

Product: Plastic K-N

	<u>1974</u>	<u>1976</u>	<u>1977**</u>	
15				
16	San Pedro Harbor			
	Ship Supplies	\$102		
17	S&F Coulter	506		
	Davies & Co.	316		
18	Vulcan Foundry	0	435	0
	Brockaway Glass	0	1454	0
19	Glass Containers	0	348	0
20	Brantley Sales &	0	482	1483
	Service			

** Asbestos-free shortly after February 1977.

All of Kaiser Aluminum's records, from which the sales information in subpart (I) was derived, are identified in subpart (j).

(j) Sales Analysis Reports for K/R:

For the years 1969-1972, Reports KACC/EA 651-01

1 "Refractories Quarterly Customer Alpha Product Detail";
2 EA 652-01 "Refractories Division Detail by Region by
3 Customer"; year end report for 1970 (which includes year end
4 report for 1969); year end report for 1972 (which includes
5 year end report for 1971).

6 For the years 1973-1977, Reports KACC/NR 555-10
7 "Refractory Monthly Customer Sales, Sales by District/Primary
8 Salesman"; year end reports.

9 For the years 1976-1977 KACC/NR 565-50 "Refractories
10 Sales Analysis SIC Report"; year end report. For 1974, "Sales
11 Analysis" LV301 Report 705.

12 **INTERROGATORY NO. 32 (PREMISES DEFENDANTS only)**

13 Did YOU install, remove, or handle or contract to have
14 others install, remove, or handle RAW ASBESTOS or ASBESTOS-
15 CONTAINING PRODUCTS at any PREMISES in the GEOGRAPHIC AREA
16 which PREMISES is at issue as to YOU in San Francisco Superior
17 Court asbestos litigation as of the date of your answers to
18 these interrogatories? If so:

19 A. IDENTIFY the PREMISES.

20 B. For each of the PREMISES:

21 1. State the nature of your ownership or
22 possessory interest;

23 2. State the inclusive date of that interest;

24 3. IDENTIFY the party from whom that interest
25 was acquired;

26 4. IDENTIFY the party, if any, to whom that
27 interest was transferred.

1 C. IDENTIFY every contract to which YOU were a
2 party or of which you have knowledge wherein the performance
3 of such contract involved the installation, removal,
4 disturbing or handling of any RAW ASBESTOS or ASBESTOS-
5 CONTAINING PRODUCTS at YOUR PREMISES. For each such contract:

6 1. IDENTIFY the parties to the contract;

7 2. Provide a general description and specific
8 location of the work to be performed by each party to the
9 contract;

10 3. IDENTIFY and describe the NATURE of the
11 RAW ASBESTOS or ASBESTOS-CONTAINING PRODUCTS installed,
12 removed, disturbed or handled in the performance of the
13 contract;

14 4. State the dates of the contract and the
15 dates of performance;

16 D. Except as provided in response to subpart (c),
17 has any work other than routine maintenance been done on or to
18 the PREMISES that involved the installation, removal,
19 disturbing or handling of RAW ASBESTOS or ASBESTOS-CONTAINING
20 PRODUCTS? If so, for each such instance:

21 1. State the inclusive dates of the work;

22 2. Provide a general description and specific
23 location of the work;

24 3. State whether the work was done by YOU
25 and/or YOUR employees;

26 4. IDENTIFY and describe the NATURE of the
27 RAW ASBESTOS or ASBESTOS-CONTAINING PRODUCTS installed,

1 removed, handled or disturbed;

2 5. IDENTIFY from whom the RAW ASBESTOS OR
3 ASBESTOS-CONTAINING PRODUCTS were acquired.

4 E. Has any asbestos abatement effort been made at
5 the PREMISES? If so, for each such effort:

6 1. IDENTIFY who did the work;

7 2. State the inclusive dates thereof;

8 3. State whether samples were taken, and, if
9 the samples still exist, IDENTIFY the custodian of the
10 samples;

11 4. State whether any material was tested,
12 and, if so, what were the results of each test;

13 5. IDENTIFY each test result with sufficient
14 particularity for purposes of a request for production of
15 documents, or, in the alternative, attach a copy to YOUR
16 answers to these interrogatories.

17 F. Except for insurance coverage litigation, have
18 you filed suit against, or otherwise sought to recover from,
19 any person or entity for some or all of the cost of asbestos
20 abatement or for the property damage allegedly caused by the
21 presence of RAW ASBESTOS or ASBESTOS-CONTAINING PRODUCTS on
22 the PREMISES identified in response to subpart (A) above? If
23 so:

24 1. IDENTIFY the person or entity against whom
25 YOU have filed suit or otherwise sought to recover;

26 2. If YOU have filed suit, state the court in
27 which the action was filed, the date on which it was filed,

1 IDENTIFY all Plaintiffs and Defendants and their counsel of
2 record;

3 3. State whether or not the case has been
4 resolved, and, if so, what was the status or disposition.

5 G. Either (1) attach all DOCUMENTS evidencing the
6 information sought in this Interrogatory and its subparts to
7 your answers to these Interrogatories, or (2) attach disks
8 containing such data, or (3) describe such DOCUMENTS with
9 sufficient particularity that they may be made the subject of
10 a request for production of documents.

11 H. IDENTIFY the person(s) presently most
12 knowledgeable about the information sought in this
13 interrogatory or its subparts.

14 **RESPONSE TO INTERROGATORY NO. 32:**

15 Not applicable.

16 **INTERROGATORY NO. 33 (CONTRACTOR DEFENDANTS only)**

17 At any time between 1930 and 1985, did YOU hold a
18 contractor's license in the State of California? If so:

19 A. IDENTIFY each license by type, date and number.

20 B. If on the date of your answers YOU are a
21 defendant in four or more asbestos actions in San Francisco
22 Superior Court, IDENTIFY each job or contract that YOU
23 performed (directly or through one or more subcontractors)
24 during this time period for work in any PREMISES which is at
25 issue as to YOU on such date, and in any PREMISES of 50,000
26 square feet or more in the GEOGRAPHIC AREA which job or
27 contract involved installation, removal, disturbing or

1 handling RAW ASBESTOS or ASBESTOS-CONTAINING PRODUCTS.
2 (Alternatively, at your option, you may IDENTIFY each job or
3 contract YOU performed (directly or through one or more
4 subcontractors) during this time frame for all work, or for
5 all work on PREMISES of 50,000 square feet or more, in the
6 GEOGRAPHIC AREA.) As to each such job or contract:

7 1. IDENTIFY the location (including name of
8 ship, if applicable) where the job or work was performed;

9 2. State the date of the contract or the
10 inclusive dates of the work;

11 3. IDENTIFY the person or entity with whom
12 you contracted;

13 4. State your job or contract number.

14 C. If on the date of your answers you are not a
15 defendant in four or more asbestos actions in San Francisco
16 Superior Court, IDENTIFY each job or contract that YOU
17 performed (directly or through one or more subcontractors)
18 during this time period for work in any PREMISES which is at
19 issue as to YOU on such date. As to each such job or contract:

20 1. IDENTIFY the location (including name of
21 ship, if applicable) where the job or work was performed;

22 2. State the date of the contract or the
23 inclusive dates of the work;

24 3. IDENTIFY the person or entity with whom
25 you contracted;

26 4. State your job or contract number.

27 ///

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WARTNICK LAW FIRM

JENNIFER A. KUENSTER, State Bar No. 104607
THELEN, MARRIN, JOHNSON & BRIDGES LLP
Two Embarcadero Center, Suite 2100
San Francisco, California 94111
Telephone: (415) 392-6320

Attorneys for Defendant
KAISER ALUMINUM & CHEMICAL CORPORATION

SUPERIOR COURT OF THE STATE OF CALIFORNIA
IN AND FOR THE COUNTY OF SAN FRANCISCO

IN RE:

COMPLEX ASBESTOS LITIGATION

NO. 828684

KAISER ALUMINUM & CHEMICAL
CORPORATION'S SUPPLEMENTAL
RESPONSES TO PLAINTIFFS'
STANDARD INTERROGATORIES
TO ALL DEFENDANTS PURSUANT
TO GENERAL ORDER 129

SUPPLEMENTAL RESPONSES TO INTERROGATORIES

INTERROGATORY NO. 1:

IDENTIFY the person verifying these answers on YOUR behalf.

SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 1:

Mr. Bonn is currently Vice President, Planning &
Corporate Development.

INTERROGATORY NO. 2:

State the date of first employment with YOU, and the
dates and titles of each job position the person verifying

1 these interrogatories has held while employed by YOU.

2 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 2:**

3 Mr. Bonn's employment history at Kaiser Aluminum is
4 as follows:

5 6/67-12/69	Treasury Department - Oakland
6 1/70-8/74	European Regional HQ-Frankfurt Germany
7 9/74-7/79	Trentwood-Customer Service/Production Control, Product Dept. Mgr.
8 8/79-12/80	Plant Manager-Toledo
9 1/81-8/82	Reduction Plant Manager - Chalmette
10 9/82-4/87	Fabrication BU Manager-Electrical Products, Die Formed Products
11 4/87-4/91	VP-Planning-Oakland
12 4/91-12/92	VP&CAO-Oakland
13 1/93-1997	VP&CAO-Oakland & Pleasanton VP-Planning and Corporate Development-Pleasanton

14 **INTERROGATORY NO. 9:**

15 IDENTIFY YOUR custodian of Business Records.

16 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 9:**

17 Documents pertinent to asbestos litigation have been
18 retrieved, organized and maintained under the supervision of
19 counsel for Kaiser Aluminum. For the most part, such
20 documents ordinarily would have been discarded years ago
21 consistent with applicable retention guidelines but have been
22 kept due to ongoing litigation. No particular employee of
23 Kaiser Aluminum is designated as the "custodian" of these
24 records. With regard to active files of Kaiser Aluminum,
25 Marilyn W. Forrey is Records Administrator. Ms. Forrey is
26 based in the corporate offices of Kaiser Aluminum in
27 Pleasanton, California.

///

///

1 INTERROGATORY NO. 10:

2 IDENTIFY the person or persons most knowledgeable about:

3 A. YOUR acquisition of RAW ASBESTOS and/or
4 ASBESTOS CONTAINING PRODUCTS;

5 B. YOUR use of RAW ASBESTOS and/or ASBESTOS
6 CONTAINING PRODUCTS;

7 C. YOUR contracting with others to do work
8 involving use or handling of RAW ASBESTOS or ASBESTOS
9 CONTAINING PRODUCTS.

10 SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 10:

11 Certain current or former employees are believed to
12 have some knowledge concerning limited use of asbestos fibers
13 in plant operations and/or contracting with others to install
14 or handle asbestos-containing products in plant operations.
15 Persons believed to have some knowledge on these matters
16 include Ted Aucoin, a former industrial hygienist at the
17 Chalmette, Louisiana plant; William Crates, a former safety
18 supervisor at the Chalmette, Louisiana plant; G. Stan Fergin,
19 a former industrial hygienist at the Mead, Washington plant;
20 Mark W. Jones, a former industrial hygienist at the
21 Ravenswood, West Virginia plant; William Carey Salassi, a
22 former industrial hygienist at the Chalmette, Louisiana plant;
23 Kenneth Shaw, a former industrial hygienist, and H.M. Mikami
24 (now deceased) and M.A. Peters, formerly employed at the
25 Plymouth Meeting, Pennsylvania plant.

26 INTERROGATORY NO. 13:

27 For each of the following, please state whether, at any

1 time within the time frame or until such time as any defendant
2 which had been engaged in MARKETING RAW ASBESTOS or ASBESTOS-
3 CONTAINING PRODUCTS discontinued the MARKETING of such
4 products, THIS DEFENDANT was a member or paid dues for any
5 representative of THIS DEFENDANT (excluding faculty members of
6 educational institutions) to be a member of the following:

7 A. American Conference of Governmental Industrial
8 Hygienists;

9 B. American Industrial Hygiene Association;

10 C. American Petroleum Institute;

11 D. American Railroad Association;

12 E. Asbestos Cement Producers Association;

13 F. Asbestos Information Association (AIA) (please
14 answer through date of your answers);

15 G. Asbestos Information Association/North America
16 (AIA/NA) (please answer through date of your answers);

17 H. Asbestos Textile Institute (ATI);

18 I. Industrial Hygiene Foundation and/or Industrial
19 Health Foundation (IHF);

20 J. Industrial Mineral Insulation Manufacturers
21 Institute;

22 K. Magnesia Insulation Manufacturers' Association;

23 L. Magnesia Silica Insulation Manufacturers
24 Association;

25 M. Mineral Wool Institute;

26 N. National Insulation Manufacturers Association
27 (NIMA);

- 1 O. National Safety Council;
- 2 P. New York Academy of Sciences;
- 3 Q. Quebec Asbestos Mining Association (QAMA);
- 4 R. Refractories Institute;
- 5 S. Safe Building Alliance (please answer through
6 date of your answers);
- 7 T. Thermal Insulation Manufacturers Association
8 (TIMA);
- 9 U. U.S. Maritime Commission;
- 10 V. IDENTIFY any other organizations, associations
11 or groups of manufacturers, miners, distributors, importers,
12 labelers, suppliers, and/or sellers of ASBESTOS-CONTAINING
13 PRODUCTS of which THIS DEFENDANT was a member;
- 14 W. IDENTIFY any such representative of THIS
15 DEFENDANT.

16 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 13:**

17 W. Kaiser Aluminum is not able to reconstruct from
18 information reasonably available to it the committee
19 memberships of all present or former employees who may have
20 been active in the organizations listed in Response to
21 Interrogatory No. 13. However, it is aware that James P.
22 Hughes was on the Medical Committee of the IHF, that H.K.
23 Lambie participated in the Metals Section of the NSC and that
24 J.F. Knight, H.M. Nelson and C.E. Lindsay were members of
25 committees of TRI. Plaintiffs may obtain additional
26 information responsive to Subsection W of this Interrogatory
27 by directly contacting the AIHA, NSC, IHF, or TRI, or by

1 obtaining membership rosters previously produced in the
2 asbestos litigation by those organizations.

3 INTERROGATORY NO. 17:

4 Had THIS DEFENDANT prior to 1973 received any DOCUMENTS
5 containing results or conclusions of any studies and/or tests
6 conducted by any laboratory, including but not limited to, the
7 Saranac Laboratory relating to asbestos exposure in the
8 workplace or the human health consequences of exposure to
9 asbestos? If so:

10 A. Either (1) attach all DOCUMENTS evidencing the
11 information sought in this Interrogatory and its subparts to
12 your answers to these Interrogatories, or (2) attach disks
13 containing such data, or (3) describe such DOCUMENTS with
14 sufficient particularity that they may be made the subject of
15 a request for production of documents.

16 B. State the date upon which THIS DEFENDANT first
17 received such DOCUMENTS;

18 C. State the IDENTITY of the custodian of such
19 DOCUMENTS;

20 D. This interrogatory does not apply to DOCUMENTS
21 contained in a library maintained by a DEFENDANT hospital or a
22 DEFENDANT's library providing access to the general public.

23 SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 17:

24 Despite diligent search and reasonable inquiry,
25 Kaiser Aluminum has not located, and is not aware of, any
26 documents received prior to 1973 that contain the results or
27 conclusions of any studies and/or tests conducted by any

1 laboratory that relate to "asbestos exposure in the workplace
2 or human health consequences of exposure to asbestos," other
3 than those indicated below. Kaiser Aluminum has located
4 certain publications that address the use of asbestos-
5 containing products in the workplace or health hazards
6 associated with undue exposure to excessive levels of
7 respirable asbestos fibers. Kaiser Aluminum is uncertain as
8 to when any of these publications were actually received; some
9 or all of these publications likely were received after 1972.
10 However, with regard to those publications that were published
11 prior to 1973, Kaiser Aluminum lists each publication below:

12 *Asbestos Exposure, Smoking, and Neoplasm* by Irving J.
13 Selikoff, et al.

14 *Asbestos Exposure and Neoplasia* by Irving J. Selikoff, et
15 al.

16 *Asbestos Bodies and Mesothelioma* by J. Stumphius and P.B.
17 Meyer

18 *American Review of Respiratory Disease - "Asbestos and
19 Health in 1969"* by George W. Wright

20 *Two Cases of Malignant Mesothelioma after Exposure to
21 Asbestos* by Paul Champion

22 *Airborne Asbestos* prepared by the Committee on Biologic
23 Effects of Atmospheric Pollutants of the Division of Medical
24 Sciences, National Research Council

25 *Criteria for a Recommended Standard . . . Occupational
26 Exposure to Asbestos* by NIOSH

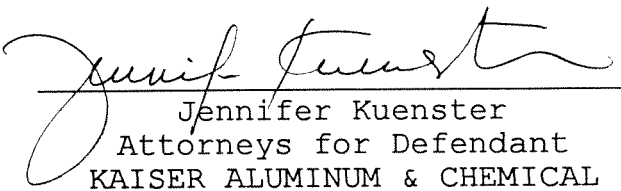
27 *Application of Sprayed Inorganic Fibers Containing
Asbestos: Occupational Health Hazards* by William B. Reitze,
et al.

The documents referenced above have been maintained under

1 or more years ago. With respect to the specific subsections
2 of this Interrogatory, Kaiser Aluminum states as follows:

- 3 A. Unknown.
- 4 B. None located.
- 5 C. Not applicable.
- 6 D. Unknown.

7
8 Dated: December 11, 1997 THELEN, MARRIN, JOHNSON & BRIDGES LLP

9
10 By 
11 Jennifer Kuenster
12 Attorneys for Defendant
13 KAISER ALUMINUM & CHEMICAL
14 CORPORATION
15
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21
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27

1 A.P. Green.

2 **INTERROGATORY NO. 36:**

3 If THIS DEFENDANT entered into any agreements for the
4 rebranding of ASBESTOS-CONTAINING PRODUCTS manufactured, sold,
5 supplied or distributed by another person or entity for resale
6 or distribution by YOU, describe each of the agreements and
7 the parties to said agreement, the terms, the duration, and
8 the names of each product(s) and/or material(s) covered by
9 each such agreement.

10 **RESPONSE TO INTERROGATORY NO. 36:**

11 After the merger with Mexico Refractories, Kaiser
12 Refractories continued the informal arrangement by which those
13 suppliers identified in Response to Interrogatory No. 31
14 rebranded five of the insulation products identified in that
15 Response for sale by K/R, typically in small quantities, to
16 certain of its refractory customers. A sixth insulation
17 product, K/R Super D Block Insulation, was rebranded for K/R
18 by International Vermiculite commencing in August of 1971.
19 Kaiser Aluminum has not located any contract or written
20 agreement which memorializes the terms governing this
21 rebranding.

22 **INTERROGATORY NO. 37:**

23 As to RAW ASBESTOS and to each such ASBESTOS-CONTAINING
24 PRODUCT listed in YOUR responses to Interrogatories No. 29 and
25 31 did DEFENDANT warn of the health hazards of asbestos? If
26 so, state for each such warning:

27 A. The content, size, color, and location; whether

1 the warning appeared on the material and/or on the container,
2 and/or was placed on a tag; whether the warning was included
3 in contracts; whether the warning was included in advertising
4 or other promotional materials.

5 B. State whether you have any photographs thereof;

6 C. The inclusive dates on which you used each such
7 warning;

8 D. State all changes you made in such warnings and
9 the dates of such changes; and

10 E. Identify the person most knowledgeable about
11 your warnings and warning policy.

12 **RESPONSE TO INTERROGATORY NO. 37:**

13 Use of Plastic K-N did not pose any asbestos-related
14 hazard to human health and, accordingly, K/R did not inform
15 users of Plastic K-N that it posed any such hazard. Plastic
16 K-N was a very dense, malleable plastic chrome ore product
17 which did not release respirable asbestos fibers. The wet,
18 pliable state of the product, combined with the adhesive
19 effect of the sodium silicate binder in the product, prevented
20 release of asbestos fibers. By the time any remnant of
21 Plastic K-N was removed from service, the minimal chrysotile
22 content of Plastic K-N would have decomposed and been
23 transformed by heat into non-asbestos mineral substances or
24 otherwise it would have been enmeshed in a matrix of other
25 materials that would prevent the release of respirable
26 asbestos fibers.

27 K/R requested that the supplier of each of the

1 asbestos-containing insulation products, which K/R upon
2 occasion sold, include warning labels on the containers of
3 these products.

4 K/R Vee Block Insulation (K/R V-18 Block
5 Insulation), K/R Vee Block Mix and K/R Super D. Block
6 Insulation had the following warning labels placed on the
7 front of those products' packaging beginning approximately
8 April 1, 1973:

9
10 Caution: This product contains asbestos fiber.
11 Avoid breathing the dust. Inhalation of asbestos in
12 excessive quantities over long periods may be
13 harmful. If dust is created when the product is
14 handled, use proper protection. If dust control
15 cannot be provided, respirators approved by the U.S.
16 Bureau of Mines for protection against
17 pneumoconiosis must be used.

18 Consistent with K/R's request, the suppliers of K/R
19 M-Block Insulation, K/R Plastic Insulation, and K/R Hard-Top
20 Finishing Cement placed caution/warning labels on containers
21 beginning in early 1971. Kaiser Aluminum is not certain of
22 the precise date of first use of these labels or the actual
23 language used. However, it believes that the wording was
24 similar or comparable to that shown above.

25 Kaiser Aluminum is not aware that any changes were
26 made to these caution/warning labels. Kaiser Aluminum has not
27 located any photographs of these caution/warning labels as
they appeared on the packaging of any of the above-referenced
rebranded products.

1 INTERROGATORY NO. 38:

2 With respect to each of YOUR ASBESTOS-CONTAINING
3 PRODUCTS, state whether THIS DEFENDANT's name, a trademark,
4 logos, color coding, or other identifying markings ever
5 appeared on the actual product itself. If so, IDENTIFY each
6 such product, state when the practice to place such
7 identifying markings upon the product was begun and when it
8 ended, if applicable, and describe in detail the pertinent
9 marking(s) and the purpose, if any, of such markings.

10 RESPONSE TO INTERROGATORY NO. 38:

11 Kaiser Aluminum states that for each of the products
12 referenced below, the packaging for each such product had the
13 following identifying information:

14 (1) K/R Plastic K-N - the name "Kaiser
15 Refractories" as well as a "K-N" logo at least while the
16 product contained any asbestos.

17 (2) K/R 1202 brick - the name "Kaiser Refractories"
18 on the Kraft cardboard wrapping for the pallets on which the
19 bricks were shipped.

20 (3) Rebranded insulation products - the product
21 name, the name "Kaiser Refractories," and, from sometime in
22 the 1960's, a gloved hand logo on at least the packaging for
23 M-Block Insulation, Plastic Insulation and Vee-Block Mix.

24 Kaiser Aluminum is not able to confirm identifying
25 information for purposes of the other products named in
26 response to Interrogatory No. 31.

27 ///

1 INTERROGATORY NO. 39:

2 Between the years 1930 to 1985, did THIS DEFENDANT
3 purchase or otherwise acquire any ASBESTOS-CONTAINING PRODUCT
4 lines from another person or entity? If so, state for each
5 such purchase:

6 A. Date of purchase or acquisition;

7 B. Terms of purchase or acquisition agreement;

8 C. Either (1) attach all DOCUMENTS evidencing said
9 acquisition, or (2) attach disks containing such data, or (3)
10 describe such DOCUMENTS with sufficient particularity that
11 they may be made the subject of a request for production of
12 documents;

13 D. Trade, brand, and/or generic name of each such
14 product line so acquired;

15 E. Name of the person or entity from whom YOU
16 purchased or acquired each such ASBESTOS-CONTAINING PRODUCT
17 line; and

18 F. Location of any manufacturing facilities so
19 acquired, and the type of ASBESTOS-CONTAINING PRODUCTS
20 manufactured therein.

21 RESPONSE TO INTERROGATORY NO. 39:

22 Yes. By an asset acquisition, Kaiser Aluminum
23 acquired on February 28, 1974, two plants formerly owned by
24 International Minerals & Chemical Corporation and located in
25 Plymouth Meeting, Pennsylvania and Gary, Indiana. By virtue
26 of this acquisition, Kaiser Aluminum commenced to manufacture
27 and sell Plastic K-N with less than 1% chrysotile asbestos

1 content by weight. This product was manufactured at the
2 Plymouth Meeting, Pennsylvania plant. For several months
3 after February 28, 1974, Plastic K-N also was manufactured in
4 the Gary, Indiana plant. On April 24, 1968, Kaiser Aluminum
5 purchased certain assets of Birdsboro Corporation. By virtue
6 of this acquisition, Kaiser Aluminum began manufacturing
7 Mirawal building panels. These panels were manufactured at a
8 manufacturing plant in Port Carbon, Pennsylvania. Kaiser
9 Aluminum is willing to produce for inspection at the offices
10 of its counsel, on a mutually agreeable date, a copy of the
11 relevant portions of the purchase agreements.

12 **INTERROGATORY NO. 40:**

13 Between the years 1930 to 1985, did THIS DEFENDANT sell
14 any ASBESTOS-CONTAINING PRODUCT line to another person or
15 entity? If so, state for each such sale:

16 A. Date of sale;

17 B. Terms of sales agreement;

18 C. Either (1) attach all DOCUMENTS evidencing said
19 sale, or (2) attach disks containing such data, or (3)
20 describe such DOCUMENTS with sufficient particularity that
21 they may be made the subject of a request for production of
22 documents;

23 D. Trade, brand, and/or generic name of each such
24 product line sold;

25 E. Name of person or entity to whom you sold each
26 such ASBESTOS-CONTAINING PRODUCTS line; and

27 F. Location of any manufacturing facilities so

1 sold, and the type of ASBESTOS-CONTAINING PRODUCTS
2 manufactured therein.

3 RESPONSE TO INTERROGATORY NO. 40:

4 On or about April 13, 1977, certain assets that had
5 been purchased from Birdsboro Corporation, as referenced in
6 response to Interrogatory No. 39, were sold to Glasweld
7 International. Kaiser Aluminum is willing to produce for
8 inspection at the offices of its counsel, on a mutually
9 agreeable date, a copy of the relevant portions of the sale
10 agreement.

11 INTERROGATORY NO. 41:

12 IDENTIFY all brochures, pamphlets, catalogs or other
13 advertising relating to ASBESTOS-CONTAINING PRODUCTS and/or
14 RAW ASBESTOS which THIS DEFENDANT manufactured, sold,
15 distributed or supplied from the year 1930 to 1985. For each
16 such document, state:

- 17 A. A description of the document;
18 B. The year it was printed;
19 C. The period of time in which it was used;
20 D. The purpose of such document;
21 E. Whether the documents or copies of said
22 documents presently exist;
23 F. If said documents or copies still exist, where
24 they are located; and
25 G. The IDENTITY of the custodian of such
26 documents.

27 ///

1 RESPONSE TO INTERROGATORY NO. 41:

2 Kaiser Aluminum is not presently aware of any
3 advertising of the products identified in Kaiser Aluminum's
4 answer to Interrogatory No. 31 in newspapers, magazines or
5 other such literature. However, some of these products were
6 listed and/or described in standard Kaiser Refractories
7 product brochures and in a standard product directory of The
8 Refractories Institute. Kaiser Aluminum does not have
9 sufficient information presently available to answer other
10 aspects of Interrogatory No. 41 except to the extent
11 information is contained in said brochures. Kaiser Aluminum
12 is willing to produce for inspection at the offices of its
13 counsel, on a mutually agreeable date, available samples of
14 listings of such products in these publications.

15 INTERROGATORY NO. 42:

16 State if YOU have or had within YOUR corporate or other
17 business structure any CONTRACT UNITS.

18 RESPONSE TO INTERROGATORY NO. 42:

19 No.

20 INTERROGATORY NO. 43:

21 State whether or not any of YOUR CONTRACT UNITS installed
22 and/or removed RAW ASBESTOS and/or ASBESTOS-CONTAINING
23 PRODUCTS in the GEOGRAPHIC AREA at any time between 1930 and
24 1985. If so:

25 A. State the business addresses and name of the
26 CONTRACT UNIT;

27 B. State the inclusive periods of time the

1 CONTRACT UNITS were working in the GEOGRAPHIC AREA;

2 C. State the name and address of each job site
3 within the GEOGRAPHIC AREA and the dates the CONTRACT UNIT
4 worked at those job sites, and, IDENTIFY the RAW ASBESTOS
5 and/or ASBESTOS-CONTAINING PRODUCTS installed or removed on
6 each occasion;

7 D. Either (1) attach all DOCUMENTS evidencing the
8 information sought in this Interrogatory and its subparts to
9 your answers to these Interrogatories, or (2) attach disks
10 containing such data, or (3) describe such DOCUMENTS with
11 sufficient particularity that they may be made the subject of
12 a request for production of documents.

13 **RESPONSE TO INTERROGATORY NO. 43:**

14 Not applicable.

15 **INTERROGATORY NO. 44:**

16 When do YOU contend that THIS DEFENDANT first became
17 aware that there is an association between asbestos exposure
18 and disease in human beings?

19 **RESPONSE TO INTERROGATORY NO. 44:**

20 Kaiser Aluminum is a corporation which employed many
21 thousands of individuals at numerous locations during the
22 years at issue for purposes of this Interrogatory. Kaiser
23 Aluminum is unable to reconstruct when particular individual
24 employees may have first become aware that there was an
25 association between prolonged exposure to excessive levels of
26 asbestos exposure and disease in human beings. Nor is it
27 reasonably possible to determine when the corporation

1 supposedly first acquired this type of information. However,
2 Kaiser Aluminum believes that, by the time of enactment of
3 OSHA regulations governing exposure to asbestos in the
4 workplace in the early 1970's, various employees were aware of
5 increasing concern in the medical and scientific communities
6 over potential health risks posed by prolonged exposure to
7 excessive levels of respirable asbestos fibers.

8 **INTERROGATORY NO. 45:**

9 How do YOU contend that THIS DEFENDANT first became aware
10 that there is an association between asbestos exposure and
11 disease in human beings.

12 **RESPONSE TO INTERROGATORY NO. 45:**

13 See Response to Interrogatory No. 44.

14 **INTERROGATORY NO. 46:**

15 Either (1) attach all DOCUMENTS evidencing the
16 information upon which YOUR contentions in YOUR answers to
17 Interrogatories No. 44 and No. 45 are based, or (2) attach
18 disks containing such data, or (3) describe such DOCUMENTS
19 with sufficient particularity that they may be made the
20 subject of a request for production of documents.

21 **RESPONSE TO INTERROGATORY NO. 46:**

22 Not applicable.

23 **INTERROGATORY NO. 47:**

24 When did THIS DEFENDANT first warn its employees that
25 exposure to asbestos could be hazardous to human health?

26 State:

27 A. Whether the first such warning was written or

1 Kaiser Aluminum has located no evidence of any such citation
2 for the period in question.

3 **INTERROGATORY NO. 51:**

4 If THIS DEFENDANT has ever owned or operated a railroad,
5 state:

6 A. The IDENTITY of each such railroad, including
7 the name(s) of such railroad during the time period of YOUR
8 ownership and/or operation, the principal place of business of
9 such railroad and the dates of YOUR ownership and/or
10 operation;

11 B. The geographic area of operation of such
12 railroad;

13 C. The name(s) of such railroad prior to YOUR
14 ownership and/or operation;

15 D. The IDENTITY of the person or entity from whom
16 YOU purchased your ownership or operating interest, and the
17 date of such purchase;

18 E. The IDENTITY of the person or entity to whom
19 YOU sold your ownership or operating interest, and the date of
20 such sale;

21 F. Whether copies of DOCUMENTS evidencing your
22 ownership/operation and/or sale exist;

23 G. The IDENTITY of the Custodian of such
24 DOCUMENTS;

25 H. To the extent that information has not been
26 given in answers to Interrogatory Nos. 32 and 33, the
27 information requested in Interrogatory Nos. 32 and 33, for

1 oral;

2 B. Whether copies of DOCUMENTS containing such
3 warning exist;

4 C. The IDENTITY of the custodian of such
5 DOCUMENTS;

6 D. The content of the warning.

7 **RESPONSE TO INTERROGATORY NO. 47:**

8 Kaiser Aluminum is a corporation which employed many
9 thousands of individuals at numerous locations during the
10 years at issue for purposes of this Interrogatory. Kaiser
11 Aluminum is unable to determine when any of its personnel may
12 have first directed a warning of this nature to any employee
13 or group of employees at any of the many plants or facilities
14 operated by Kaiser Aluminum since its inception.

15 **INTERROGATORY NO. 48:**

16 Did THIS DEFENDANT ever issue a written COMPANY policy
17 discontinuing warning its employees that exposure to asbestos
18 could be hazardous to human health? If so,

19 A. Provide the date;

20 B. Describe the circumstances; and

21 C. Either (1) attach all DOCUMENTS evidencing the
22 information sought in this Interrogatory and its subparts to
23 your answers to these Interrogatories, or (2) attach disks
24 containing such data, or (3) describe such DOCUMENTS with
25 sufficient particularity that they may be made the subject of
26 a request for production of documents.

27 ///

1 RESPONSE TO INTERROGATORY NO. 48:

2 Kaiser Aluminum is certainly not aware of any such
3 statement made to any of its employees.

4 INTERROGATORY NO. 49:

5 Did THIS DEFENDANT provide any Independent Contractor or
6 Subcontractor within the GEOGRAPHIC AREA with a written
7 warning that exposure to asbestos could be hazardous to human
8 health.

9 RESPONSE TO INTERROGATORY NO. 49:

10 See response to Interrogatory No. 37, which details
11 the warnings placed on certain K/R insulation products.

12 INTERROGATORY NO. 50:

13 Has THIS DEFENDANT been cited for or otherwise charged by
14 a public agency with a violation in the GEOGRAPHIC AREA of any
15 statute, ordinance, safety order, regulation, or law
16 pertaining to asbestos exposure? For each occasion, IDENTIFY:

17 A. The code section, safety order, statute, or
18 regulation for which THIS DEFENDANT had been cited or
19 otherwise charged;

20 B. The date(s) thereof;

21 C. The agency or other governmental unit which
22 issued the citation or otherwise charged YOU;

23 D. All persons known to YOU with information
24 relevant to the incident;

25 E. What was the ultimate resolution.

26 RESPONSE TO INTERROGATORY NO. 50:

27 After a diligent search and reasonable inquiry,

1 each railroad owned or operated by YOU.

2 RESPONSE TO INTERROGATORY NO. 51:

3 Not applicable.

4 INTERROGATORY NO. 52:

5 If DEFENDANT has ever owned or operated a shipyard,
6 state:

7 A. The IDENTITY of each such shipyard, including
8 the name(s) of such shipyard during the time period of YOUR
9 ownership and/or operation, the place of business of such
10 shipyard and the dates of YOUR ownership and/or operation;

11 B. The name(s) of such shipyard prior to YOUR
12 ownership and/or operation;

13 C. The IDENTITY of the person or entity to whom
14 YOU sold your ownership or operating interest, and the date of
15 such sale;

16 D. Whether copies of DOCUMENTS evidencing your
17 ownership/operation and/or sale exist;

18 E. Whether any representative of THIS DEFENDANT
19 attended the Maritime Commission Conference in December 1942
20 in Chicago, Illinois? If so, IDENTIFY any such representative
21 of THIS DEFENDANT;

22 F. The IDENTITY of the Custodian of such
23 DOCUMENTS;

24 G. To the extent that information has not been
25 given in answers to Interrogatory No. 32, the information
26 requested in Interrogatory No. 32, for each shipyard owned or
27 operated by YOU.

1 RESPONSE TO INTERROGATORY NO. 52:

2 A. Richmond Yards No. 1 and No. 2, Richmond,
3 California, 1941 - 1946.

4 B. Not applicable.

5 C. The operations of Richmond Yards No. 1 and No. 2
6 terminated on July 31, 1946. Shortly thereafter the
7 yards were turned over to the United States Maritime
8 Commission ("U.S.M.C."). All leases, contracts,
9 service orders, etc. were assigned to the U.S.M.C.
10 as of August 1, 1946. Thereafter, both the land and
11 facilities were declared surplus.

12 D. On information and belief Kaiser Aluminum states
13 that various documents regarding the operation of
14 these yards are held by the Maritime Administration
15 in Washington, D.C. These documents are equally
16 available to plaintiffs.

17 E. Not known.

18 F. See response to D above.

19 G. Kaiser Aluminum is aware that there was installation
20 of asbestos-containing products on ships at
21 Richmond Yard No. 1 and No. 2.

22 a. Richmond Yard No. 1 and No. 2.

23 b. 1. Permanente Metals was the operator of
24 these yards under contract with the U.S. Maritime
25 Commission.

26 2. 1941 to July 31, 1946.

27 3. Not applicable.

1 4. U.S.M.C.

2 c. Information on contracts between the U.S.M.C.
3 and Permanente Metals is equally available to
4 plaintiffs from the U.S.M.C.

5 d. Not known.

6 e. Not applicable. Defendant last occupied the
7 premises in 1946.

8 f. Not applicable.

9 g. All known documents are available from the
10 U.S.M.C. through a F.O.I.A. request.

11 h. Kaiser Aluminum is not aware of any current
12 employee with any personal knowledge about the
13 operation of Richmond Yards 1 and 2 during
14 World War II.

15 **INTERROGATORY NO. 53:**

16 At any time between 1930 and 1985, did you import,
17 export, ship, transship or otherwise transport RAW ASBESTOS or
18 ASBESTOS-CONTAINING PRODUCTS into, out of or through any port
19 in the GEOGRAPHIC AREA? If so, for each occasion:

20 A. IDENTIFY and describe the NATURE and amount of
21 RAW ASBESTOS and/or ASBESTOS-CONTAINING PRODUCTS;

22 B. IDENTIFY the ship or ships (including the
23 owners and operators thereof) onto or from which the RAW
24 ASBESTOS and/or ASBESTOS-CONTAINING PRODUCTS were loaded,
25 unloaded or transshipped;

26 C. State the dates, port and pier involved for
27 each occasion;

1 D. Either (1) attach all DOCUMENTS evidencing the
2 information sought in this Interrogatory and its subparts to
3 your answers to these Interrogatories, or (2) attach disks
4 containing such data, or (3) describe such DOCUMENTS with
5 sufficient particularity that they may be made the subject of
6 a request for production of documents.

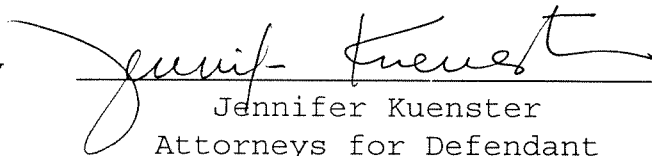
7 RESPONSE TO INTERROGATORY NO. 53:

8 After a diligent search and reasonable inquiry,
9 Kaiser Aluminum has located no evidence of any such
10 transactions by it.

11
12 Dated: June 19, 1997

THELEN, MARRIN, JOHNSON & BRIDGES
13 LLP

14
15 By



Jennifer Kuenster
Attorneys for Defendant
KAISER ALUMINUM & CHEMICAL
CORPORATION

EXHIBIT A

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A.J. Trommershausen
1609 Ptarmiyam 1B
Walnut Creek, CA 94595

T.J. Walker
355 Sunset Drive
Reno, NV 89509

R.J. Archer
3763 Oak Brook Court
Pleasanton, CA 94566

R.E. Ewart
409 Elm Street
Anaconda, Montana 59711

Linnea Castaneda
No address available

J.P. Hughes, M.D.
124 Guilford Road
Piedmont, CA 94611

N.H. Proctor
53 Parkville Drive
Appleton, WI

- 1 3. Richard L. Damberg (Deposition)
2 11 Windsor Avenue
3 Piedmont, CA
4 Date of Deposition: June 1, 1989
5 Place of Deposition: Gold, Farrell & Marks
6 41 Madison Avenue
7 New York, NY 10010
8 Court Reporter: Douglas Winter
9 Brody & Geiser
10 41 Madison Avenue
11 New York, NY
12 Case Name & Jurisdiction: Cesarini v. A.P. Green
13 Refractories
14 Index No. 21490/86 -
15 Supreme Court of the State
16 of New York, County of
17 Nassau
18 Plaintiff Attorney: Michael Ponterio
19 One Niagara Square
20 Buffalo, NY
21
22 4. Edwin J. Doody (Deposition)
23 714 Friscoville Avenue
24 Arabi, LA
25 Date of Deposition: July 8, 1986
26 Place of Deposition: Administration Building
27 Kaiser Chalmette Plant, LA
Court Reporter: Paul W. Williams, C.S.R.
3200 Ridgelake Dr., Suite 302
Metairie, LA 70002
Case Name & Jurisdiction: In re Ralph Manguno,
United States District
Court for the Eastern
District of Louisiana
Plaintiff Attorney: Robert Urann,
2540 Severn Avenue,
Metairie, LA

- 1 5. Roderick Ernst Ewart (Deposition)
2 1675 Lindenwood Dr.
3 Concord, CA 94521
4 Date of Deposition: July 31, 1985
5 Place of Deposition: KACC
6 300 Lakeside Drive
7 Oakland, CA 94643
8 Court Reporter: Joyce Jordon
9 Pizzotti & Jarnagin
10 363 17th Street
11 Oakland, CA
12 Case Name & Jurisdiction: Sparrows Point Steel Plant
13 Asbestos Cases,
14 October 1985, Group II
15 Cases - U.S. District Court
16 for the District of
17 Maryland, No. BML-3
18 Plaintiff Attorney: Shepard Hoffman
19 1301 York Road
20 Lutherville, MO
21
22 6. Ronald R. McHaney (Deposition)
23 18021 North Saddle Hill Road
24 Colbert, WA 99005
25 Date of Deposition: April 9, 1997
26 Place of Deposition: Red Lion Inn
27 Spokane, WA
Court Reporter: Paul W. Williams
3200 Ridge Drive
Metairie, LA
Case Name & Jurisdiction: Scott v. Metropolitan Life
34th Judicial District
St. Bernard Parish, LA
Plaintiff Attorney: Frank Swarr
201 South Charles Street
New Orleans, LA

1 7. Mark W. Jones (Deposition)
2 3400 Taylor Way
3 Tacoma, WA 98421
4 Date of Deposition: March 5, 1996
5 Place of Deposition: 3400 Taylor Way, Tacoma, WA
6 Court Reporter: Bibiana Carter
7 A. William Roberts, Jr & Associates
8 46-A State Street
9 Charleston, SC 29401
10 Case Name & Jurisdiction: In re Asbestos IV Circuit
11 Court of Kanawha County,
12 West Virginia (Consolidated
13 Premises Cases)
14 Plaintiff Attorney: Sheryl Ingram
15 151 Meeting Street
16 Charleston, SC

17 8. Frank P. Kraus (Deposition)
18 8549 Squadron Drive
19 Chalmette, LA 70043
20 Date of Deposition: July 15, 1992
21 Place of Deposition: Lemle & Kelleher
22 PanAmerican Life Center
23 21st Floor
24 601 Poydras Street
25 New Orleans, LA
26 Court Reporter: Shali M. Giacontiere, CSR
27 Parish of Orleans, LA
504-464-5658
Case Name & Jurisdiction: Twila Wallace v. KACC,
34th Judicial District of
the Parish of St. Bernard,
State of Louisiana
Plaintiff Attorney: Robert Urann,
2540 Severn Avenue,
Metairie, LA

- 1 9. Frank P. Kraus (Deposition)
2 Date of Deposition: May 31, 1995
3 Place of Deposition: Lemle & Kelleher
4 PanAmerican Life Center
5 21st Floor
6 601 Poydras Street
7 New Orleans, LA
8 Court Reporter: Borrello Court Reporters, Inc.
9 New Orleans, LA 70130
10 (504) 522-1175
11 Case Name & Jurisdiction: Larmar Aultman, et al. v.
12 Metropolitan Life Insurance
13 Company, et al., Civil
14 District Court, Parish of
15 New Orleans, State of
16 Louisiana
17 Plaintiff Attorney: Mickey Landry
18 201 South Charles Street
19 New Orleans, LA
- 20 10. William Roger Linn (Deposition)
21 1530 Reliez Valley Road
22 Lafayette, CA 94549
23 Date of Deposition: February 19, 1987
24 Place of Deposition: Barry, McTiernan & Moore
25 115 Broadway
26 New York, NY 10006
27 Court Reporter: Anna Guido
Westchester Reporting Service, Inc.
171 East Post Road
White Plains, NY 10601
Case Name & Jurisdiction: Pellegrino v. A.P. Green,
et al.
Docket No. 436185, Supreme
Court of the State of New
York, County of Kings
Plaintiff Attorney: Thomas Farrell
41 Madison Avenue
New York, NY



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VERIFICATION

[To Follow]

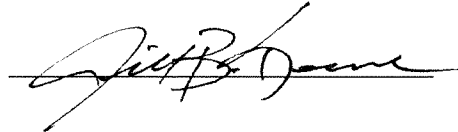


LAW OFFICES OF CHRISTOPHER GRELL
685 MARKET STREET, SUITE 540
THE MONADNOCK BUILDING
SAN FRANCISCO, CA 94105

LAW OFFICES OF JERRY NEIL PAUL
16830 VENTURA BLVD., SUITE 500
ENCINO, CA 91430

LAW OFFICES OF JACK CLAPPER
2330 MARINSHIP WAY, SUITE 140
SAUSALITO, CA 94965

I declare under penalty of perjury that the foregoing is true
and correct. Executed 19 JUNE 1997 at San Francisco,
California.

A handwritten signature in cursive script, appearing to read "Jerry Neil Paul", written over a horizontal line.

LAW OFFICES OF CHRISTOPHER GRELL
685 MARKET STREET, SUITE 540
THE MONADNOCK BUILDING
SAN FRANCISCO, CA 94105

LAW OFFICES OF JERRY NEIL PAUL
16830 VENTURA BLVD., SUITE 500
ENCINO, CA 91430

LAW OFFICES OF JACK CLAPPER
2330 MARINSHIP WAY, SUITE 140
SAUSALITO, CA 94965

I declare under penalty of perjury that the foregoing is true
and correct. Executed 16 DECEMBER 1997 at San Francisco,
California.



1 RESPONSE TO INTERROGATORY NO. 33:

2 Not applicable.

3 INTERROGATORY NO. 34:

4 Did any of the distributors identified in your Answer to
5 Interrogatory Nos. 29 and 31 above have an exclusive
6 distributorship? If so, state the relevant time period.

7 RESPONSE TO INTERROGATORY NO. 34:

8 No.

9 INTERROGATORY NO. 35:

10 If THIS DEFENDANT entered into any agreements for the
11 rebranding of any ASBESTOS-CONTAINING PRODUCTS by THIS
12 DEFENDANT for resale or distribution by another person or
13 entity, describe each agreement's terms and the parties to
14 said agreement, the duration of the agreement, and name of
15 each product(s) and/or material(s) covered by each such
16 agreement.

17 RESPONSE TO INTERROGATORY NO. 35:

18 Kaiser Aluminum did not initially enter into any
19 such agreements. However, it took over two private rebrand
20 agreements for Plastic K-N after it acquired various assets
21 from the E. J. Lavino Division of International Minerals &
22 Chemical Corporation effective February 28, 1974. The Plastic
23 K-N was rebranded for Babcock & Wilcox and A.P. Green
24 Refractories Company. The rebranded names were "Babcock &
25 Wilcox Plastic Chrome Ore" and "Green P.C." Kaiser Aluminum
26 has not located any contracts or written agreements governing
27 the rebranding of Plastic K-N by it for Babcock & Wilcox or

1 the custody of legal counsel for Kaiser Aluminum. See
2 Supplemental Response to Interrogatory No. 9.

3 **INTERROGATORY NO. 19:**

4 With the exception of OSHA compliance, had THIS DEFENDANT
5 (except for a defendant that is an educational institution)
6 prior to 1980 exchanged DOCUMENTS or communicated with any
7 person or other COMPANY expressly regarding the results of
8 tests and/or studies relating to asbestos exposure in the
9 workplace or the human health consequences of exposure to
10 asbestos? If so, state:

11 A. Each person or COMPANY with whom the
12 information was exchanged or to whom it was communicated;

13 B. The date(s) of any such exchanges or
14 communications;

15 C. The IDENTITY of the custodian of such
16 DOCUMENTS.

17 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 19:**

18 Kaiser Aluminum objects to this Interrogatory to the
19 extent that it is intended to cover any confidential
20 communication or exchange of documents that occurred between
21 Kaiser Aluminum and any person or entity, including in
22 particular any attorney, insurer or consultant, for purposes
23 of the defense of any pending or anticipated legal claim
24 against Kaiser Aluminum. Any such materials would be
25 privileged from disclosure pursuant to the attorney/client
26 privilege and/or work product doctrine as recognized in this
27 State. Kaiser Aluminum has located two letters regarding the

1 Bowser-Morner Testing Laboratories, Inc. and samples taken by
2 Kaiser Aluminum in one of its plants.

3 The documents referenced above have been maintained
4 under the custody of legal counsel for Kaiser Aluminum. See
5 Supplemental Response to Interrogatory No. 9.

6 **INTERROGATORY NO. 21:**

7 Has THIS DEFENDANT (except for a defendant that is an
8 educational institution) conducted, or caused to be conducted,
9 tests, and/or studies of ambient asbestos dust created during
10 the manufacture, processing and/or assembling for sale of
11 ASBESTOS-CONTAINING PRODUCTS? If so, state:

12 A. Each manufacturing facility, including location
13 and address, at which any such test and/or study was
14 conducted;

15 B. The date of each such test and/or study;

16 C. The individual(s) or entity conducting each
17 such test and/or study;

18 D. Whether THIS DEFENDANT has any DOCUMENTS
19 containing the results and/or conclusions of each such study;

20 E. The IDENTITY of the custodian of such
21 DOCUMENTS.

22 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 21:**

23 The referenced documentation regarding results of
24 air sampling conducted at the Plymouth Meeting, Pennsylvania
25 plant will be produced.

26 **INTERROGATORY NO. 22:**

27 Has THIS DEFENDANT (except for a defendant that is an

1 educational institution) conducted, or caused to be conducted,
2 any tests and/or studies on ambient asbestos dust levels at
3 any location or job site where ASBESTOS-CONTAINING PRODUCTS
4 were installed, utilized or removed? If so, for the first 5
5 tests and/or studies, state:

6 A. The location, including name and address, at
7 which each such test and/or study was conducted;

8 B. The individual(s) or entity conducting each
9 such test and/or study;

10 C. The date of each such test and/or study;

11 D. Whether THIS DEFENDANT has any DOCUMENTS
12 containing the results and/or conclusions of each such test
13 and/or study;

14 E. The IDENTITY of the custodian of such
15 DOCUMENTS.

16 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 22:**

17 Kaiser Aluminum is producing the earliest available
18 documents pertaining to air sampling by it for respirable
19 asbestos fibers. These represent the earliest such
20 documentation that Kaiser Aluminum, after a diligent search
21 and reasonable inquiry, has been able to locate.

22 **INTERROGATORY NO. 24:**

23 Has THIS DEFENDANT made available to its employees a
24 medical examination program to determine the absence or
25 presence of asbestos-related disease? If so, state:

26 A. Whether chest x-rays or pulmonary function
27 tests were part of such program(s);

1 B. Whether participation in any such program was a
2 mandatory condition of employment or was voluntary;

3 C. Whether THIS DEFENDANT has DOCUMENTS of such
4 program(s);

5 D. The IDENTITY of the custodian of such
6 DOCUMENTS.

7 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 24:**

8 Kaiser Aluminum is producing available documentation
9 regarding the corporate guidelines referenced in its Response
10 to Interrogatory No. 24.

11 **INTERROGATORY NO. 28:**

12 State whether THIS DEFENDANT, between 1930 and 1985, has
13 ever engaged in the following activities with regard to RAW
14 ASBESTOS, and if so, state the inclusive dates of such
15 activity:

- 16 A. Mining;
- 17 B. Milling;
- 18 C. Supply;
- 19 D. Importing;
- 20 E. Processing;
- 21 F. Distribution;
- 22 G. Marketing;
- 23 H. Sale;
- 24 I. Brokering.

25 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 28:**

26 Kaiser Aluminum believes that a former subsidiary,
27 Kaiser Trading Company, once briefly engaged in the

1 importation and subsequent sale of asbestos fibers. Kaiser
2 Aluminum believes that this occurred during 1978 and 1979.

3 INTERROGATORY NO. 29:

4 If YOUR answer to any of subparts of Interrogatory 28
5 regarding RAW ASBESTOS is in the affirmative, state:

6 A. The trade, brand name, and/or generic name of
7 such RAW ASBESTOS milled or MARKETED in any form or quantity
8 between 1930 and 1985;

9 B. The date(s) such RAW ASBESTOS was first placed
10 on the market, including the date(s) such RAW ASBESTOS was
11 first marketed;

12 1. On an experimental basis;

13 2. On a test basis;

14 3. For sale.

15 C. The date(s) such RAW ASBESTOS:

16 1. Ceased to be produced; or

17 2. Was recalled from the market, if ever.

18 D. A description of the chemical composition of
19 such RAW ASBESTOS, including the type and/or grade of
20 asbestos;

21 E. A description of the physical appearance and
22 nature of such RAW ASBESTOS, including any color coding,
23 distinctive marking and/or logo on the packaging or container;

24 F. A detailed description of the intended use of
25 such RAW ASBESTOS, including any temperature limits for each
26 such use;

27 G. Whether such RAW ASBESTOS was on the U.S.

1 Government's "Qualified Products List," and if so, the
2 inclusive dates it was on such list;

3 H. IDENTIFY to whom such RAW ASBESTOS has, at any
4 time, been sold. As to each such, state:

5 I. Whether any of THIS DEFENDANT's RAW ASBESTOS
6 has, at any time, been sold, shipped, or otherwise
7 distributed, used or installed to or at any COMPANY (including
8 power company or utility), governmental agency or entity,
9 shipyard, distributor, refinery, contractor, supplier, PREMISE
10 owner or occupant, ship owner, or other PREMISE or site in the
11 GEOGRAPHIC AREA and whether any of THIS DEFENDANT's RAW
12 ASBESTOS has at any time, been sold to any manufacturer, or
13 manufacturing facility, of ASBESTOS-CONTAINING PRODUCTS. If
14 so, state:

15 1. The names of each such COMPANY,
16 governmental agency or entity, shipyard, distributor,
17 supplier, manufacturer or refinery;

18 2. The inclusive dates of each such sale, and
19 the amount (quantity) and the trade brand name of such RAW
20 ASBESTOS sold;

21 3. The manner of shipment (e.g. boat, rail,
22 etc.).

23 4. Whether you have any records indicating
24 any such sale or shipment and, if so, the name, address and
25 job classification of each person who currently has possession
26 of such records.

27 5. Either (1) attach all DOCUMENTS evidencing

1 the information sought in this Interrogatory and its subparts
2 to your answers to these Interrogatories, or (2) attach disks
3 containing such data, or (3) describe such DOCUMENTS with
4 sufficient particularity that they may be made the subject of
5 a request for production of documents.

6 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 29:**

7 Kaiser Aluminum only recently has learned of limited
8 transactions of the former Kaiser Trading Company that
9 involved asbestos fibers, as referenced in Response to
10 Interrogatory No. 28. Based upon information currently
11 available, Kaiser Aluminum believes that these transactions
12 were limited to the acquisition from a company based in Milan,
13 Italy in 1978 and 1979 of asbestos fibers and their subsequent
14 sale in the United States during the same years. Kaiser
15 Aluminum is still in the process of investigating this matter.

16 **INTERROGATORY NO. 44:**

17 When do YOU contend that THIS DEFENDANT first became
18 aware that there is an association between asbestos exposure
19 and disease in human beings?

20 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 44:**

21 As previously indicated, Kaiser Aluminum is not in a
22 position to make any specific contention as to when "this
23 defendant first became aware" of any association between undue
24 exposure to excessive levels of respirable asbestos fibers and
25 disease in humans since (1) the Interrogatory fails to
26 indicate whose knowledge is considered by plaintiffs to be
27 knowledge attributable to the entire corporation and (2)

1 Kaiser Aluminum is unable to reconstruct when particular
2 individual employees or company representatives may have first
3 become aware of such an association. Absent a more specific
4 inquiry by plaintiffs, Kaiser Aluminum is not able to provide
5 a more complete response to this Interrogatory. However,
6 Kaiser Aluminum does contend that its management and
7 supervisory employees did not have general awareness as to the
8 relationship between undue asbestos exposure and disease in
9 humans at any point prior to the early 1970's.

10 **INTERROGATORY NO. 45:**

11 How do YOU contend that THIS DEFENDANT first became aware
12 that there is an association between asbestos exposure and
13 disease in human beings.

14 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 45:**

15 See Supplemental Response to Interrogatory No. 44.

16 **INTERROGATORY NO. 46:**

17 Either (1) attach all DOCUMENTS evidencing the
18 information upon which YOUR contentions in YOUR answers to
19 Interrogatories No. 44 and No. 45 are based, or (2) attach
20 disks containing such data, or (3) describe such DOCUMENTS
21 with sufficient particularity that they may be made the
22 subject of a request for production of documents.

23 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 46:**

24 Kaiser Aluminum has not located, and is not aware
25 of, any documentation of when the corporation supposedly
26 "first became aware" of an association between undue exposure
27 to excessive levels of respirable asbestos fibers and disease

1 in humans. See Supplemental Response to Interrogatory No. 44.

2 INTERROGATORY NO. 47:

3 When did THIS DEFENDANT first warn its employees that
4 exposure to asbestos could be hazardous to human health?
5 State:

6 A. Whether the first such warning was written or
7 oral;

8 B. Whether copies of DOCUMENTS containing such
9 warning exist;

10 C. The IDENTITY of the custodian of such
11 DOCUMENTS;

12 D. The content of the warning.

13 SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 47:

14 Despite diligent search and reasonable inquiry,
15 Kaiser Aluminum is not able to determine when any company
16 personnel may have first issued a warning to employees
17 regarding any risk to human health posed by undue exposure to
18 excessive levels of respirable asbestos fibers. However,
19 Kaiser Aluminum believes that warnings regarding undue
20 exposure to excessive levels of respirable asbestos fibers
21 were issued to potentially exposed employees by the early to
22 mid-1970's at certain of its plants where usage of asbestos-
23 containing products had been identified. However, Kaiser
24 Aluminum has not been able to reconstruct from available
25 information the first instance of any such warnings at its
26 plants or the exact nature or form of such warnings. The
27 matters inquired of in this Interrogatory occurred twenty-five

1 JENNIFER A. KUENSTER, State Bar No. 104607
2 THELEN, MARRIN, JOHNSON & BRIDGES LLP
3 Two Embarcadero Center, Suite 2100
4 San Francisco, California 94111
5 Telephone: (415) 392-6320

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BRAYTON HARLEY CURTIS
HAND OVERNIGHT MAIL

Attorneys for Defendant
KAISER ALUMINUM & CHEMICAL CORPORATION

6
7 SUPERIOR COURT OF THE STATE OF CALIFORNIA
8
9 IN AND FOR THE COUNTY OF SAN FRANCISCO

10
11
12
13 IN RE:
14
15 COMPLEX ASBESTOS LITIGATION

NO. 828684

KAISER ALUMINUM & CHEMICAL
CORPORATION'S SECOND
SUPPLEMENTAL RESPONSES TO
PLAINTIFFS' STANDARD
INTERROGATORIES TO ALL
DEFENDANTS PURSUANT TO
GENERAL ORDER 129

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19 SUPPLEMENTAL RESPONSES TO INTERROGATORY NOS. 23 AND 31
20 INTERROGATORY NO. 23:

21 Did THIS DEFENDANT (except for a defendant that is an
22 educational institution) have any laboratory or other similar
23 type of facility anywhere in the United States at which it
24 conducted, or caused to be conducted, any tests and/or studies
25 of ASBESTOS-CONTAINING PRODUCTS or RAW ASBESTOS relating to
26 the health consequences of asbestos or the dust generated by
27 any use of asbestos or ASBESTOS-CONTAINING PRODUCTS. If so,

1 state:

2 A. The location, including name and address, at
3 which each test and/or study was conducted;

4 B. The individual(s) or entity conducting each
5 such test and/or study;

6 C. The date of each such test and/or study;

7 D. Whether THIS DEFENDANT has any DOCUMENTS
8 containing the results and/or conclusions of each such test
9 and/or study;

10 E. The IDENTITY of the custodian of such
11 DOCUMENTS.

12 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 23:**

13 Kaiser Aluminum did not have a laboratory or similar
14 facility at which it conducted general scientific or medical
15 research regarding asbestos-containing products or raw
16 asbestos or the health consequences of undue exposure to
17 excessive levels of respirable asbestos fibers. Kaiser
18 Aluminum has owned a research facility known as the Center for
19 Technology located in Pleasanton, California. Kaiser Aluminum
20 is only aware of one instance in which the Center for
21 Technology engaged in research or testing concerning the
22 release of any asbestos fibers during use of a product that
23 contained asbestos. This was a project in November of 1984
24 that involved the analysis of Plastic K-N removed from an open
25 hearth furnace door at the Sparrows Point Steel Plant of
26 Bethlehem Steel outside of Baltimore, Maryland. Those
27 directly involved in the testing and analysis were W.R. Alder

1 and W.H. Boyer of Kaiser Aluminum. Two documents dated
2 November 20, 1984 were generated as a result of this project.
3 These are in the possession of counsel for Kaiser Aluminum.
4 The test confirmed that Plastic K-N as used in open hearth
5 furnace doors would not have released respirable asbestos
6 fibers.

7 INTERROGATORY NO. 31:

8 If your answer to any subpart of Interrogatory No. 31
9 regarding "ASBESTOS-CONTAINING PRODUCTS" is in the
10 affirmative, state:

11 A. The trade, brand name, and/or generic name of
12 each such ASBESTOS-CONTAINING PRODUCT MARKETED in any form or
13 quantity between 1930 and 1985;

14 B. The date(s) each such ASBESTOS-CONTAINING
15 PRODUCT was first placed on the market, including the date(s)
16 each such ASBESTOS-CONTAINING PRODUCT was first MARKETED;

- 17 1. On an experimental basis;
18 2. On a test basis; or
19 3. For sale.

20 C. The date(s) each such ASBESTOS-CONTAINING
21 PRODUCT:

- 22 1. Ceased to be produced; or
23 2. Was recalled from the market, if ever.

24 D. A detailed description of the chemical
25 composition of each such ASBESTOS-CONTAINING PRODUCT,
26 including the type and/or grade of asbestos and/or asbestos
27 fiber contained in each such product and the quantitative

1 percentage of asbestos or asbestos fiber in each such product,
2 and all non-asbestos components of the ASBESTOS-CONTAINING
3 PRODUCT, and if the chemical composition changed over time,
4 the inclusive dates of each formulation;

5 E. A description of the physical appearance and
6 nature of each such ASBESTOS-CONTAINING PRODUCT, including any
7 color coding, distinctive marking and/or logo, either on the
8 product or on the packaging;

9 F. A detailed description of the intended use of
10 each such ASBESTOS-CONTAINING PRODUCT, including any
11 temperature limits for each such use;

12 G. Whether any such ASBESTOS-CONTAINING PRODUCT
13 was on the U.S. Government's "Qualified Products List," and if
14 so, the inclusive dates it was on such list;

15 H. The name and address of the supplier of the RAW
16 ASBESTOS used in each such product and the time period of such
17 supply;

18 I. Whether any of THIS DEFENDANT'S RAW ASBESTOS OR
19 ASBESTOS-CONTAINING PRODUCTS have, at any time, been sold,
20 shipped, or otherwise distributed to any COMPANY (including
21 power company or utility), governmental agency or entity,
22 shipyard, distributor, refinery, contractor, supplier,
23 manufacturer, PREMISE owner or occupant, ship owner, or other
24 PREMISE or site in the GEOGRAPHIC AREA. If so, state:

25 1. The names of each such COMPANY,
26 governmental agency or entity, shipyard, distributor,
27 supplier, manufacturer, refinery, contractor, PREMISE owner or

1 occupant, ship owner, PREMISE or site;

2 2. The inclusive dates of each such sale,
3 shipment, distribution, use or installation and the amount
4 (volume) and the trade or brand name of each such ASBESTOS-
5 CONTAINING PRODUCT sold;

6 3. Whether you have any records indicating
7 any such sale, shipment, distribution, use or installation
8 and, if so, the name, address and job classification of each
9 person who currently has possession of such records.

10 J. Either (1) attach all DOCUMENTS evidencing the
11 information sought in this Interrogatory and its subparts to
12 your answers to these Interrogatories, or (2) attach disks
13 containing such data, or (3) describe such DOCUMENTS with
14 sufficient particularity that they may be made the subject of
15 a request for production of documents.

16 SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 31:

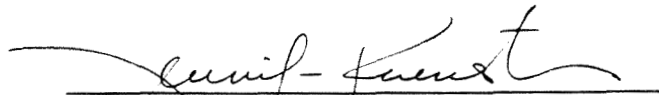
17 In its original Response to this Interrogatory
18 served in June of 1997, Kaiser Aluminum identified each and
19 every asbestos-containing product that it has supplied,
20 distributed, marketed, sold, labeled or manufactured.

21 Dated:

22 *March 6, 1998*

THELEN, MARRIN, JOHNSON & BRIDGES LLP

23
24 By


25 Jennifer Kuenster
26 Attorneys for Defendant
Kaiser Aluminum
& Chemical Corporation

KAISER
REFRACTORIES

Handwritten signature



**HANDBOOK OF
REFRACTORY
PRODUCTS**

NUMBER

ASSIGNED TO:



KAISER REFRACTORIES

GENERAL SALES OFFICES

300 Lakeside Drive Route J State Route 344
Oakland, California 94604 Mexico, Missouri 65265 Columbiana, Ohio 44408

DISTRICT OFFICES

ALABAMA Birmingham	MARYLAND Baltimore	OKLAHOMA Tulsa
CALIFORNIA Oakland (Emeryville) Los Angeles (Mira Loma)	MASSACHUSETTS Boston	OREGON Portland
COLORADO Denver	MICHIGAN Detroit (Dearborn)	PENNSYLVANIA Philadelphia (Bala Cynwyd) Pittsburgh
FLORIDA Temple Terrace	MISSOURI Kansas City St. Louis	TENNESSEE Memphis
ILLINOIS Chicago (Bridgeview) Rock Island	NEW JERSEY Hillside	TEXAS Dallas Houston
INDIANA Indianapolis	NEW YORK Buffalo	WASHINGTON Seattle
LOUISIANA Baton Rouge	OHIO Cleveland Marietta (DeVola) Niles Toledo	

INTERNATIONAL DEPARTMENT

World Headquarters: 300 Lakeside Drive, Oakland, Ca. 94604, U.S.A.
Cable: KAISEREF—Telex: 335-315
European Offices: 3, Place Thomas Balis, Brussels 16, Belgium
Paseo Manuel Girona 17, Barcelona, Spain
Central American and Caribbean Office:
Lucchetti 1308, Condado, Puerto Rico 00907

Subsidiaries

Ceramica Industrial Haedo S.A., 964 Belgrano, Buenos Aires, Argentina
Kaiser Refractories Pty. Ltd.—Port Kembla, N.S.W., Australia
Kaiser Refractories Pty. Ltd.—Port Adelaide, S.A., Australia
Kaiser Refractories Company—Oakville, Ontario, Canada
Kaiser Refractories—Box TR-2, Whitehall Road, Leeds, England

Licensees

Campbell Brothers Ltd., Box 4, Brisbane, Australia
Refractarios Venezolanos. S.A., Apartado 61004 Este, Caracas, Venezuela

PRODUCTS AND SERVICES:

Kaiser Refractories offers a complete line of modern basic refractories, high alumina refractories, fireclay and silica brick and specialties, and fused refractories. Kaiser Refractories engineering and gunning specialists assist in many types of applications.



Dealers and Distributors are located throughout the United States, and Representatives in the principal countries of the Free World.

M-BLOCK INSULATION FOR TEMPERATURES UP TO 1900°F

M-Block, mineral wool block insulation, is made from chemically stable mineral fiber and other selected high temperature insulators. It combines physical stability and mechanical strength with high thermal efficiency. It is furnished in a wide range of convenient sizes to provide the industrial user with a single, easily worked insulation for every application from room temperatures to 1900°F.

EASY TO INSTALL

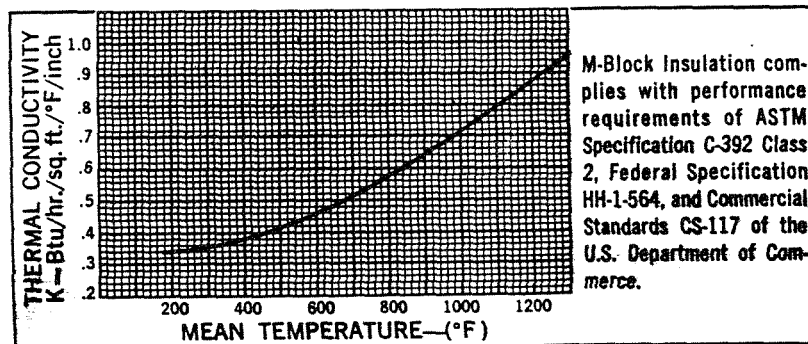
Light-weight, low-density M-Block is available in thicknesses up to 4 inches. Most installations will require only one layer, providing reduced installation cost and increased efficiency. Due to its high mechanical strength, M-Block requires a minimum of reinforcement. It is easily cut with knife or saw to form any shape, and it can be pressed over projections without cutting. The embossed surface of M-Block provides a strong grip for insulating cement finishes.

RESISTANT TO MOISTURE

In refractory back-up insulation M-Block is often used in conjunction with castables. The water repellent surface reduces excessive absorption of water needed for proper hydration of cements and castable refractories.

THERMAL CONDUCTIVITY

Pure mineral fibers combined with binder and other materials produce a product of low thermal conductivity and high refractoriness. M-Block Insulation possesses the necessary dead-air space, light weight and durability that make a truly good insulating material. Its density is 21 to 22 pounds per cubic foot. M-Block Insulation is an outstanding insulating material for heated equipment, as indicated by the conductivity chart below.



ECONOMICAL

K/R M-Block Insulation costs less per board foot than many insulators of inferior thermal value and temperature range. Material, construction and maintenance costs are less, as are fuel costs. In fact, K/R M-Block Insulation will pay for itself in a short period of time in fuel savings alone. M-Block's durability and high efficiency insure sustained savings throughout the long life of the material.

RECOMMENDED THICKNESSES

Operating temperatures, cost of fuel, operating time, ambient temperature and other factors determine the most economical thickness for block insulation. The following table, taken from U.S. Department of Commerce Commercial Standards CS-117, offers a practical guide for typical applications—and maximum efficiency.

OPERATING TEMPERATURES °F	THICKNESS OF M-BLOCK	OPERATING TEMPERATURES °F	THICKNESS OF M-BLOCK
Up to 200°F	1"	700 to 900	3½"
200 to 400	1½"	900 to 1100	4"
400 to 500	2"	1100 to 1300	4½"
500 to 600	2½"	1300 to 1500	5"
600 to 700	3"	1500 to 1600	5½"

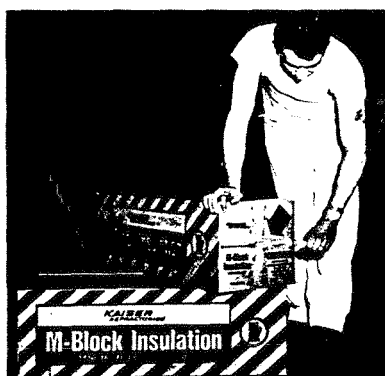
PHYSICAL PROPERTIES

Temperature Range	Up to 1900°F
Thermal Conductivity	See Graph
Compressive Strength	18 psi
Breaking Strength (10" span)	30 lb. per bd. ft.
Shrinkage at 1900°F (lineal)	1.9%
Density	1.8 lb. per bd. ft.
Stability	Inert, durable
Resistance to Moisture	Water repellent
Resistance to Corrosion	Noncorrosive
Handling Characteristics	Cleaner, less dusting

F

TYPICAL APPLICATIONS

Blast Furnace Stoves	Ovens	Heat Treating Furnaces
Refractory Back-up	Fan Housings	Chilling Pits
Ceramic Kilns	Boiler Walls	Turbines
Tanks	Melting Tanks	Pit Covers
Towers	Annealing Pits	Breechings
	Hot Air Ducts	



Start tab, pull tape completely around carton, leaving base as holding tray.



Note ease with which M-Block can be removed from base for ready use.

VEE-BLOCK INSULATION VERMICULITE BLOCK INSULATION

Vee-Block is a vermiculite block insulation designed for applications up to 1800°F. It is lightweight, retains its strength at high temperatures, and shrinkage is negligible. Vee-Block can be easily sawed to fit odd shapes, areas and contours; it has an extremely low coefficient of heat transfer. It is furnished in 1" to 6" thicknesses, any size up to 12" x 36". Shipped in cartons.

VEE-BLOCK MIX VERMICULITE-BASE CASTABLE

Vee-Block Mix is an extremely lightweight, vermiculite-base castable insulation material with an installed weight of only 24 pounds per cubic foot. It provides approximately the same thermal conductivity as block insulation. Vee-Block Mix provides a highly efficient insulation up to 1600°F. It is ideal for single coat applications in such furnace locations as walls, roofs, soot hoppers, arches, and other similar areas. It is shipped in 50-pound bags, ready for mixing with water.

HARD-TOP FINISHING CEMENT

Hard-Top is a hydraulic-setting insulating and finishing cement designed for use on heated equipment of all types, including valves, fittings and pipes. It is commonly used as a one-coat finish over block and blanket insulation where temperatures do not exceed 1200°F. Sets up hard, without heat.

PLASTIC INSULATION APPLY TO HOT SURFACES—SAVES HEAT

Plastic Insulation is made with a base of specially prepared mineral fiber combined with other ingredients to provide a material of great adhesiveness, exceptional workability, resistance to severe usage and vibration, practically no shrinkage, and high insulating value in service to 1800°F. Applied by hand or troweled, it adheres readily to any clean, unpainted surface—without reinforcement—in thicknesses up to two inches. One 50-pound bag economically covers approximately 25 square feet of surface one-inch thick.

Plastic Insulation is recommended for insulating valves, large piping, flanges, steam gates, flues, ducts, boiler settings, tanks, heaters, furnaces—any hot surface where saving heat is worthwhile.



Plastic Insulation is excellent for patching or for new installations, over block or alone.

KAISER
REFRACTORIES



**HANDBOOK OF
REFRACTORY
PRODUCTS**

NUMBER

ASSIGNED TO:



KAISER REFRATORIES

GENERAL SALES OFFICES

300 Lakeside Drive Oakland, California	Mex-R-Co Building Mexico, Missouri	State Route 344 Columbiana, Ohio
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DISTRICT OFFICES

ALABAMA Birmingham	MARYLAND Baltimore	OKLAHOMA Tulsa
CALIFORNIA Oakland (Emeryville) Los Angeles	MICHIGAN Detroit (Dearborn) Grand Rapids	OREGON Portland
COLORADO Denver	MISSOURI Kansas City St. Louis	PENNSYLVANIA Philadelphia (Bryn Mawr) Pittsburgh
FLORIDA Brandon	NEW JERSEY Hillside	TENNESSEE Chattanooga
ILLINOIS Chicago (Dolton) Rock Island	NEW YORK Buffalo	TEXAS Dallas Houston
INDIANA Indianapolis	OHIO Cleveland Marietta (DeVola)	UTAH Salt Lake City
LOUISIANA Baton Rouge	NILES Toledo	WASHINGTON Seattle

INTERNATIONAL DEPARTMENT

World Headquarters: 300 Lakeside Drive, Oakland, California, U.S.A.
Cable: KAISEREF—Telex: 03-3610
European Office: Coolsingel 75—Rotterdam, The Netherlands

SUBSIDIARIES

Kaiser Refractories Pty. Ltd.—Port Kembla, N. S. W., Australia
Kaiser Refractories Company—Oakville, Ontario, Canada

LICENSEES

The Leeds Fireclay Company, Ltd., Leeds 12, Yorkshire, England
Ceramica Olivos, S.A., Sarmiento 470, Buenos Aires, Argentina
Refractarios Venezolanos, S.A., Apt. 5004 Este, Caracas, Venezuela

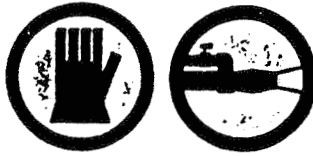
PRODUCTS AND SERVICES:

Kaiser Refractories offers a complete line of modern basic refractories, high alumina refractories, fireclay and silica brick and specialties, and fused refractories. Kaiser Refractories engineering and gunning specialists assist in many types of applications.

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THE REFRACTORIES GROUP



INSULATING REFRACTORIES

INSULATING FIREBRICK PAGE

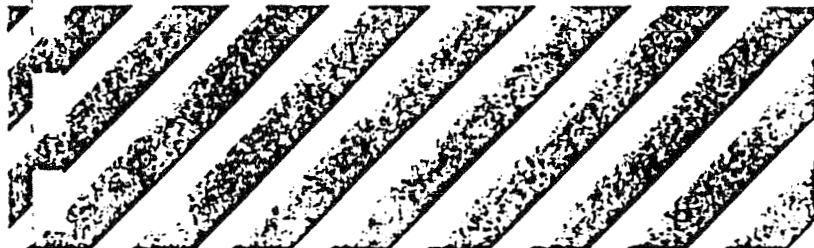
M-16™	F•2
M-20™	F•2
M-23™	F•2
M-26®	F•2
M-28™	F•2
M-30™	F•2
M-3000™	F•2
<input type="checkbox"/> Properties of K/R® Insulating Firebrick	F•4
<input type="checkbox"/> Palletized Shipments	F•4
<input type="checkbox"/> Color Coding	F•4
<input type="checkbox"/> Insulating Firebrick Special Shapes	F•5
<input type="checkbox"/> Arch Construction Using Insulating Firebrick	F•5
<input type="checkbox"/> Application Information	F•6, 7

LIGHTWEIGHT INSULATING CASTABLES

I•R•C™	F•8
ONE-SHOT™	F•8
PURO-LITE™	F•8
I•R•C™ 22	F•8
I•R•C™ 20	F•9
I•R•C™ 20-G	F•9
VEE-BLOCK™ MIX	F•12
HARD-TOP®	F•12
PLASTIC INSULATION™	F•12
<input type="checkbox"/> Composite Table of Data	F•12

BLOCK INSULATION

M-BLOCK™	F•10, 11
VEE-BLOCK™	F•12



M-BLOCK INSULATION FOR TEMPERATURES UP TO 1900°F

M-Block, mineral wool block insulation, is made from chemically stable mineral fiber and other selected high temperature insulators. It combines physical stability and mechanical strength with high thermal efficiency. It is furnished in a wide range of convenient sizes to provide the industrial user with a single, easily worked insulation for every application from room temperatures to 1900°F.

EASY TO INSTALL

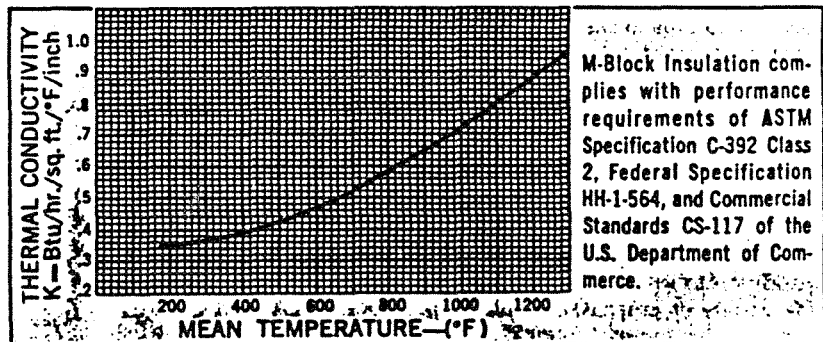
Light-weight, low-density M-Block is available in thicknesses up to 4 inches. Most installations will require only one layer, providing reduced installation cost and increased efficiency. Due to its high mechanical strength, M-Block requires a minimum of reinforcement. It is easily cut with knife or saw to form any shape, and it can be pressed over projections without cutting. The embossed surface of M-Block provides a strong grip for insulating cement finishes.

RESISTANT TO MOISTURE

In refractory back-up insulation M-Block is often used in conjunction with castables. The water repellent surface reduces excessive absorption of water needed for proper hydration of cements and castable refractories.

THERMAL CONDUCTIVITY

Pure mineral fibers combined with binder and other materials produce a product of low thermal conductivity and high refractoriness. M-Block Insulation possesses the necessary dead-air space, light weight and durability that make a truly good insulating material. Its density is 21 to 22 pounds per cubic foot. M-Block Insulation is an outstanding insulating material for heated equipment, as indicated by the conductivity chart below.



ECONOMICAL

K/R M-Block Insulation costs less per board foot than many insulators of inferior thermal value and temperature range. Material, construction and maintenance costs are less, as are fuel costs. In fact, K/R M-Block Insulation will pay for itself in a short period of time in fuel savings alone. M-Block's durability and high efficiency insure sustained savings throughout the long life of the material.

RECOMMENDED THICKNESSES

Operating temperatures, cost of fuel, operating time, ambient temperature and other factors determine the most economical thickness for block insulation. The following table, taken from U.S. Department of Commerce Commercial Standards CS-117, offers a practical guide for typical applications—and maximum efficiency.

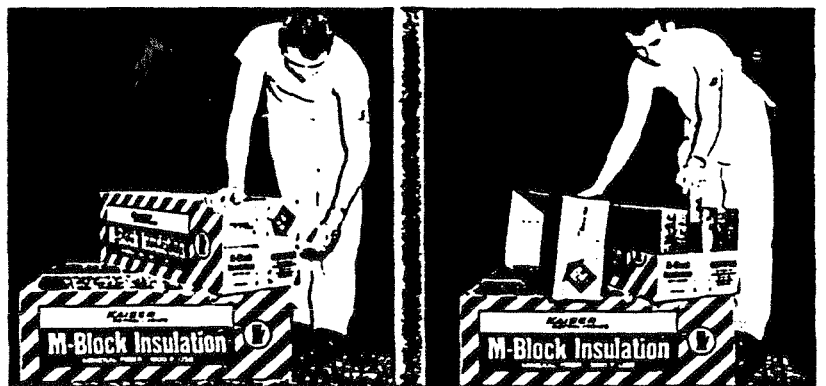
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Up to 200°F	1"	700 to 900	3½"
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400 to 500	2"	1100 to 1300	4½"
500 to 600	2½"	1300 to 1500	5"
600 to 700	3"	1500 to 1600	5½"

PHYSICAL PROPERTIES

Temperature Range	Up to 1900°F
Thermal Conductivity	See Graph
Compressive Strength	18 psi
Breaking Strength (10" span)	30 lb. per bd. ft.
Shrinkage at 1900°F (lineal)	1.9%
Density	1.8 lb. per bd. ft.
Stability	Inert, durable
Resistance to Moisture	Water repellent
Resistance to Corrosion	Noncorrosive
Handling Characteristics	Cleaner, less dusting

TYPICAL APPLICATIONS

- | | | |
|----------------------|----------------|------------------------|
| Blast Furnace Stoves | Ovens | Heat Treating Furnaces |
| Refractory Back-up | Fan Housings | Chilling Pits |
| Ceramic Kilns | Boiler Walls | Turbines |
| Tanks | Melting Tanks | Pit Covers |
| Towers | Annealing Pits | Breechings |
| | Hot Air Ducts | |



Start tab, pull tape completely around carton, leaving base as holding tray.

Note ease with which M-Block can be removed from base for ready use.

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Vee-Block is a vermiculite block insulation designed for applications up to 1800°F. It is lightweight, retains its strength at high temperatures, and shrinkage is negligible. Vee-Block can be easily sawed to fit odd shapes, areas and contours; it has an extremely low coefficient of heat transfer. It is furnished in 1" to 6" thicknesses, any size up to 12" x 36". Shipped in cartons.

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Vee-Block Mix is an extremely lightweight, vermiculite-base castable insulation material with an installed weight of only 24 pounds per cubic foot. It provides approximately the same thermal conductivity as block insulation. Vee-Block Mix provides a highly efficient insulation up to 1600°F. It is ideal for single coat applications in such furnace locations as walls, roofs, soot hoppers, arches, and other similar areas. It is shipped in 50-pound bags, ready for mixing with water.

HARD-TOP FINISHING CEMENT

Hard-Top is a hydraulic-setting insulating and finishing cement designed for use on heated equipment of all types, including valves, fittings and pipes. It is commonly used as a one-coat finish over block and blanket insulation where temperatures do not exceed 1200°F. Sets up hard, without heat.

PLASTIC INSULATION APPLY TO HOT SURFACES—SAVES HEAT

Plastic Insulation is made with a base of specially prepared mineral fiber combined with other ingredients to provide a material of great adhesiveness, exceptional workability, resistance to severe usage and vibration, practically no shrinkage, and high insulating value in service to 1800°F. Applied by hand or troweled, it adheres readily to any clean, unpainted surface—without reinforcement—in thicknesses up to two inches. One 50-pound bag economically covers approximately 25 square feet of surface one-inch thick.

Plastic Insulation is recommended for insulating valves, large piping, flanges, steam gates, flues, ducts, boiler settings, tanks, heaters, furnaces—any hot surface where saving heat is worthwhile.

INSULATING CASTABLES						
Product Name	ASTM Classification	Service Temperature Limit °F	Packaging	Material Required for Casting 1 Cu. Ft.	Method of Application	Water Required for Casting, %
I.R.C.	Q	2500	50 lb. Bag	70-80 lbs.	Cast or Gunned	40-47
ONE SHOT	Q	2400	50 lb. Bag	87-90 lbs.	Cast or Gunned	31-35
PURO-LITE	P	2250	50 lb. Bag	48-52 lbs.	Cast or Gunned	55-60
I.R.C.-22	P	2200	50 lb. Bag	48-50 lbs.	Cast or Gunned	40-47
I.R.C.-20	N	1800	50 lb. Bag	46-48 lbs.	Cast	46-55
I.R.C.-20-G	N	1800	50 lb. Bag	—	Gunned	—
PLASTIC INSULATION *		1800	50 lb. Bag	24 lbs.	Troweled	190-200
VEE-BLOCK MIX	Special	1600	50 lb. Bag	24 lbs.	Cast	170-200

*Complies with requirements of ASTM C-195.

KAISER REFRACTORY CASTABLES PRODUCT INDEX

FOR UNUSUALLY SEVERE CONDITIONS:

ACITAB®—high-purity, tabular-alumina	8
PURO-TAB®—calcium-aluminate bonded, tabular-alumina, high purity	9
LO-ERODE®—low-iron, resistant to extreme abrasion and erosion	9

FOR HIGH STRENGTH:

PUROCAST®—low-iron, general purpose 3000°F	10
HI-STRENGTH*—high structural strength to meet high-duty requirements	10
HI-STRENGTH COARSE*—excellent hot-load bearing ability	10

GENERAL PURPOSE CASTABLES:

MILL-CRETE*—low-shrinkage, spall resistant	11
SUPER FURNAS-CRETE*—super-duty quality	11
FURNAS-CRETE* REGULAR—high-duty quality	11
FURNAS-CRETE* FINE—for casting thin sections	11
FURNAS-CRETE* COARSE—resistant to thermal shock, vibration	11

LIGHTWEIGHT INSULATING CASTABLES:

I-R-C*—78-80 lbs./cu. ft., for service to 2500°F	12
I-R-C 20*—46-48 lbs./cu. ft., for service to 1800°F	12
I-R-C 20-G*—special mix for gun application	12
ONE-SHOT*—combines high strength and insulating qualities	13
VEE-BLOCK MIX*—vermiculite-base, 24 lbs./cu. ft.	13
PLASTIC INSULATION*—mineral fiber insulating cement	13

SPECIAL PURPOSE CASTABLES:

BLAST FURNACE CASTABLE [†] —for blast furnace linings or repair	14
PAK*—packing material between blast furnace lining and shell	15
SAKONITE*—refractory paving for areas exposed to metal splash	15
FURN-A-RAM®—for aluminum furnaces, "non-wetting," ram or cast	15
MEXICAST*—for "back-up" in low temperature applications	15

BASIC RAM-CAST MIXES:

Permanente® 165, Permanente® 84, Permanente® 85, Permanente® 98 and K/R-Ramcast CDC* Ram-Cast Mixes; Chrome Concrete* and Super Chrome Concrete*	20-21
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HOW TO INSTALL KAISER REFRACTORY CASTABLES	16-17
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ANCHORING REFRACTORY CASTABLE LININGS	18-19
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PNEUMATIC EMPLACEMENT	22
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*Trademarks Kaiser Aluminum & Chemical Corp.

VEE-BLOCK MIX (T.M.)

EXTREMELY LIGHTWEIGHT INSULATION

Vee-Block Mix, extremely lightweight Vermiculite-base castable insulation, weighs only 24 pounds per cubic foot when matured in place. It has the same thermal conductivity, strength and weight as Kaiser Refractories M-Block insulation, but provides the added convenience of easy single-coat application in furnace walls, roofs, soot hoppers, top decks, drum coverings, etc. Vee-Block Mix is shipped dry in 50 pound bags.

PLASTIC INSULATION (T.M.)

APPLY TO HOT SURFACES—SAVES HEAT

Plastic Insulation is made with a base of specially prepared mineral fiber combined with other ingredients to provide a material of great adhesiveness, exceptional workability, resistance to severe usage and vibration, practically no shrinkage, and high insulating value in service to 1800°F. Applied by hand or troweled, it adheres readily to any clean, unpainted surface—without reinforcement—in thicknesses up to two inches. One 50-pound bag economically covers approximately 25 square feet of surface one-inch thick.

Plastic Insulation is recommended for insulating valves, large piping, flanges, steam gates, flues, ducts, boiler settings, tanks, heaters, furnaces—any hot surface where saving heat is worthwhile.

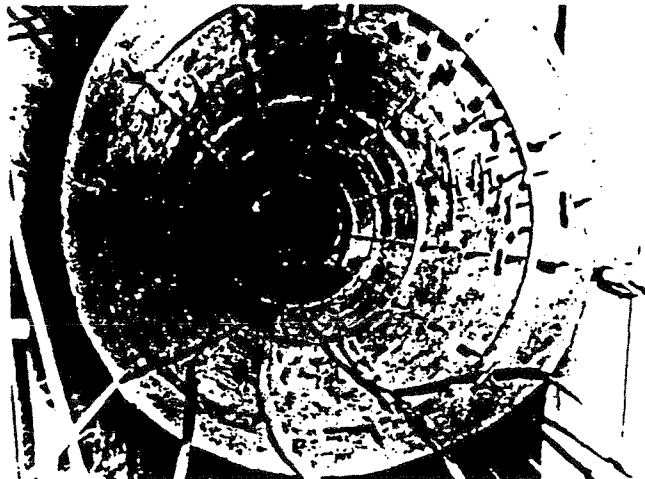
ONE-SHOT (T.M.)

COMBINING STRENGTH AND INSULATION

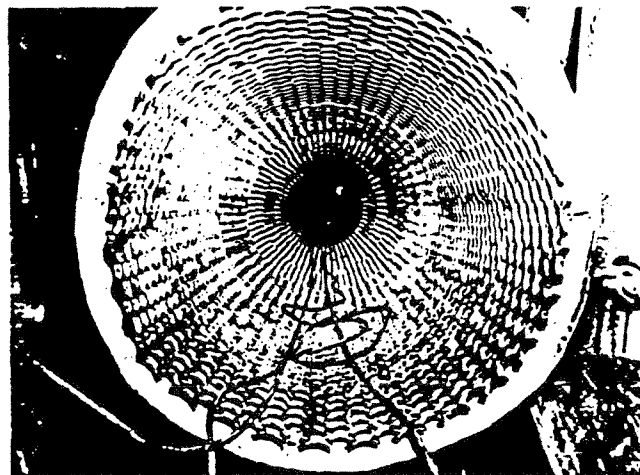
One-Shot combines into one product the most important characteristics of a high strength castable and an insulating castable. Used as a single lining, it can supplant the need for a duo-component lining. (See page 18.) One-Shot reduces heat loss, yet is dense and strong, withstanding moderate abrasion and erosion following normal installation procedures. It is highly recommended to the oil refinery, chemical and modern power plant fields, for lining oil heaters, reactors, regenerators, towers, stacks, flues, breechings and heat-treating furnaces. One-Shot weighs 94 pounds per cubic foot. It is packaged in 100-pound moisture-proof bags, ready for mixing with water for casting or gunning.

KAISER INSULATING MATERIALS

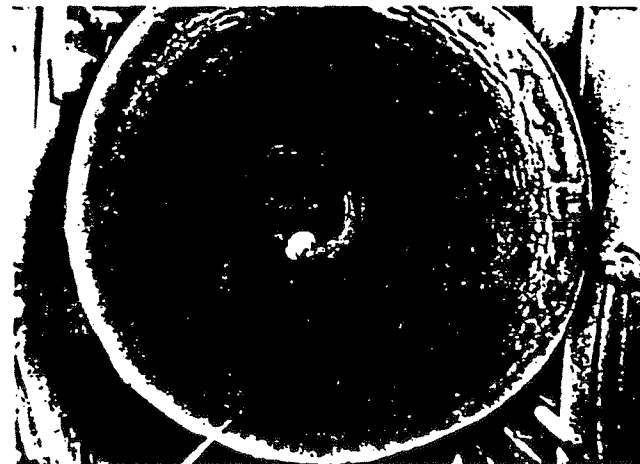
In addition to insulating castables, a wide variety of other insulating materials—insulating firebrick, block insulators, mortars and finishing cements—are available to meet various insulating needs. Ask for information.



Installation of a duo-component lining for a refinery regenerator duct begins by welding "T" studs to the steel shell.



After I-R-C 20-G insulation has been gunned up to the back of the studheads, 3/4-inch hex steel is welded to the studs.



A one-inch layer of Hi-Strength refractory castable, gunned to cover the hex steel, provides strong, durable finish.

**KAISER
REFRATORIES**



PLASTIC INSULATION
MINERAL WOOL FIBER INSULATION CEMENT

PLASTIC INSULATION — AN ALL

Kaiser Refractories' versatile Plastic Insulation is designed for use as backup in equipment operated at temperatures up to 1800° F. It is composed of high-temperature mineral wool fibers specially processed with other ingredients. The dry material is ready to mix with water for installation by trowel or gun methods.

This material is used in power plants, refineries, chemical plants, steel mills, etc., to control heat losses at relatively high temperatures. It also provides effective insulation value on drum heads, hot water fittings and low pressure steam equipment.

HIGH INSULATING EFFICIENCY. Exceptional resistance to heat transfer is achieved from the resilient balls of mineral wool fiber contained in the cement. These nodules are factory processed to correct size, then uniformly blended with adhesive binders. After Plastic Insulation is applied and dried, the thousands of tiny air cells entrapped in the resilient wool nodules impart high thermal value. Excellent Thermal Conductivity is shown in the chart below based on Guarded Hot Plate Tests conducted by J. L. Finck Laboratories, per ASTM Specifications C-177.

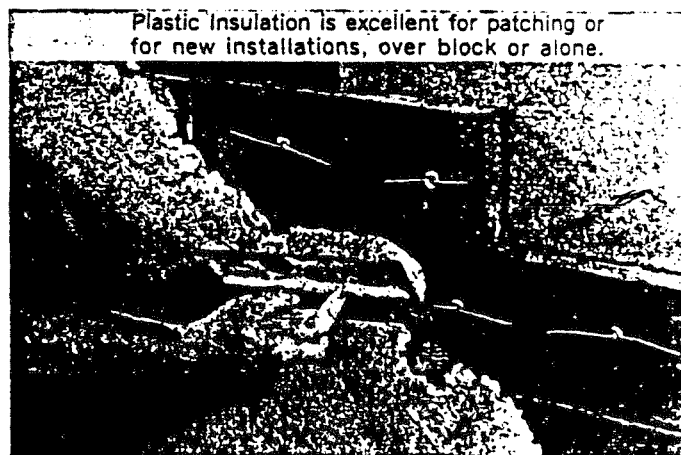
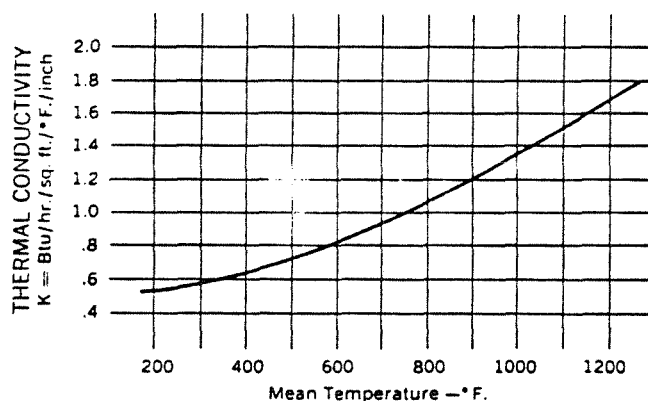
MAXIMUM COVERAGE. The primary reason for Plastic Insulation's high coverage is that its fibers do not collapse when mixed with water. Instead, they retain essentially their original size and shape. The wool nodules provide high bulk, yet are held together securely with the adhesive binders in the mixture. Coverage of Plastic Insulation is 50 board feet per 100 pounds. Thus, material requirements are computed on the basis of 2

pounds of Plastic Insulation per board foot in place. When Kaiser Plastic Insulation is applied in a monolithic layer over block or blanket insulation, 1 pound is needed per square foot one-half inch thick.

LOW SHRINKAGE. Insulating cements undergo linear or volumetric shrinkage as the mixing water dries out. The shrinkage is higher if an excess of mixing water is used than when mixed to a stiffer consistency. With Plastic Insulation, drying shrinkage is kept to a minimum. The lower shrinkage of Plastic Insulation is attributed in part to the resilient balls of mineral wool which tend to expand on drying. Other factors limiting the shrinkage are (a) the high bond strength that Plastic Insulation develops within itself as it dries, and (b) its good adhesive strength to surfaces on which it is applied.

EASY TO APPLY. Plastic Insulation has excellent workability and adhesion, suitable for installation by trowel or gun methods. Applied over block or blanket insulation it fills open joints and provides a monolithic surface for whatever type of subsequent finish is specified. In patented arch and wall fabrication and other refractory construction Plastic Insulation may be applied directly to the brickwork. This versatile insulating cement is also used on valves, fittings and similar irregular surfaces by building it up in several layers to the total desired thickness. One further use is as a caulk to seal annealing and heat treating furnace doors and openings. If service temperature reached does not exceed 1000° F. the material may be removed, reclaimed, mixed with water and reused.

THERMAL CONDUCTIVITY — PLASTIC INSULATION



MOOSE MOLDABLE INSULATION

APPLICATION RECOMMENDATIONS

Surfaces to be insulated should be free of dirt, paint, loose scale and other extraneous material. Drying is expedited if the equipment is heated during installation. Plastic Insulation is mixed with clean, fresh water at the ratio of 12 gallons per 50-pound bag. This affords a good, workable consistency ready for immediate use. Since Plastic Insulation contains no hydraulic-setting binders, it also can be kept on hand as a wet mixture, or use the following day.

As usually applied over block or blanket insulation, Plastic Insulation is trowelled one-half inch thick to fill joints and to level up the surface. When dry, Plastic Insulation provides a firm base for smooth finish cement. On equipment located indoors, or protected from moisture, the ebbed texture of Plastic Insulation may be left as is, or when dry, it can be painted with aluminum paint for pleasing appearance. For exterior uses an asphalt base covering may be applied as a weather-proofing measure.

For fit-up applications on irregularly shaped equipment, valves and fittings, the initial layer of Plastic Insulation is spotted on by hand approximately three-fourths inch thick. Successive layers are roughed on after the preceding coats have dried. When the total desired thickness is reached, the final layer is palmed smooth. On equipment subject to vibration, a reinforcing layer of galvanized wire netting is recommended before applying the final coat.

On heated masonry surfaces, such as boiler settings, hearths, ovens, etc., Plastic Insulation helps reduce air

infiltration through mortar joints, in addition to improving the thermal value. A thickness of three-fourths inch offers good resistance to the entry of excess air. This thickness can be applied on most settings without adversely affecting common brick exteriors. When the setting is composed entirely of refractory brick, greater thicknesses of Plastic Insulation usually may be used with safety.

MIXING FOR USE. Mix thoroughly with fresh water, adding approximately 12 gallons of water per 50-pound bag of Plastic Insulation. Apply to clean surface in layers not over 1" thick.

Dry Coverage: One 50-pound bag of Plastic Insulation will cover an area of 25 sq. ft.— 1" thick.

Material Requirements: 2 lbs. per sq. ft.— 1" thick.

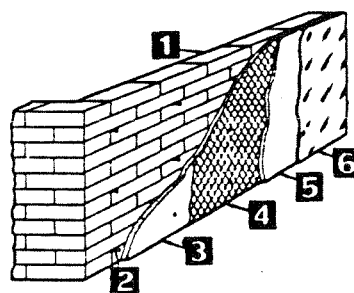
TYPICAL APPLICATIONS—Air pre-heaters • Annealing pit covers • Boiler drums, headers, shells • Boiler settings • Connectors • Core ovens • Digestors • Domestic furnaces • Ducts and breechings • Economizers • Fan housings • Feed-water heaters • Furnace arches and walls, doors and openings • Furnaces: Blast, Forge, Hot air, Normalizing • Hearths • Heat Exchangers • Ovens: Dry, Annealing, Heat-treating • Paper mill roll-ends • Steam cylinders and stills • Storage tanks: Hot water, Chemicals, Petroleum • Turbines and Pumps • Valves, pipes, fittings.

MATERIAL SPECIFICATION REFERENCE: "Mineral Wool Insulating Cement shall be Plastic Insulation, complying with the performance requirements of ASTM C-195; Federal Specification HH-C-168 (Class C); and/or Commercial Standard CS-117 of the U.S. Department of Commerce."

PHYSICAL PROPERTIES

Compressive Strength	45 lbs. psi
Tension to Steel (wet)	6 psi
Tension to Steel (dry)	9 psi
Shrinkage (wet to dry) by volume	15%
Rust Resistant	No Oxidation of Steel
Stable up to	1000° F.
Density (Applied and Dried)	24 lbs. per cu. ft.
Easily Applied	Over any Contour
Shipped in Weatherproof Paper Bags	50 lb.
MAXIMUM SERVICE TEMPERATURE	1800° F.

APPLICATION OF PLASTIC INSULATION ON BRICK SURFACE



- 1 Heated brick surface.
- 2 Nails embedded in masonry joints spaced approximately on 12-inch centers with heads projecting about 3/4 inch from the surface.
- 3 First coat of Plastic Insulation applied nearly flush with nail heads.
- 4 1-inch galvanized wire mesh secured in nail heads.
- 5 Second coat of Plastic Insulation.
- 6 Cement asphaltic finish.

OTHER KAISER REFRACTORIES INSULATION MATERIALS

I-R-C* I-R-C combines the advantages of a mix-and-pour castable with those of an insulating concrete. It is lightweight, easily mixed and poured, and has very low shrinkage on drying. I-R-C is ideal for lining breechings, flues, roofs, hearths, door linings and many others. It is usable as backup in furnaces operating to 2500°F; 78-80 pounds are required per cubic foot. I-R-C is shipped dry in 100-pound bags ready for adding water for use in casting or gunning.

I-R-C 20* I-R-C 20 is similar to I-R-C except it is lighter in weight and has greater insulating properties. Installed weight ranges between 46 and 48 pounds per cubic foot, with thermal conductivity 70% less than fireclay brick. It can be cast or troweled. I-R-C 20 is designed for use up to 1800°F. Shipped in 50-pound bags.

I-R-C 20-G* I-R-C 20-G is recommended where it is desirable to install lightweight insulating castable by gunning. It is sized specifically for gun application; otherwise, it possesses most of the characteristics of I-R-C 20. It is widely used as the back-up insulation layer (with Hi-Strength* refractory castable) in gunned duo-component linings. It is shipped in 50-pound bags.

HARD-TOP* Hard-Top is a hydraulic-setting insulating and finishing cement designed for use on heated equipment of all types, including valves, fittings and pipes. It is commonly used as a one-coat finish over block and blanket insulation where temperatures do not exceed 1200°F. Sets up hard, without heat.

VEE-BLOCK MIX* Vee-Block Mix is an extremely lightweight, vermiculite-base castable insulation material with an installed weight of only 24 pounds per cubic foot. It provides approximately the same thermal conductivity as block insulation. Vee-Block Mix provides a highly efficient insulation up to 1600°F. It is ideal for single coat applications in such furnace locations as walls, roofs, soot hoppers, arches, and other similar areas.

M-BLOCK* M-Block is a lightweight, low density insulating block designed for applications up to 1900°F. Manufactured of chemically stable mineral fiber, M-Block combines low thermal conductivity, mechanical strength and durability, with high refractoriness. Available in thicknesses up to 4 inches, M-Block is furnished in a wide range of convenient sizes to provide a single, easily worked insulation for most every application.

INSULATING FIREBRICK Kaiser Refractories' seven brands of insulating firebrick combine excellent insulating properties with the ability to withstand direct exposure to flame, heat and furnace atmospheres. They are available in a temperature use range from 1600°F. to 3000°F. in standard and special shapes — all accurate in size.

* TRADEMARKS KAISER ALUMINUM & CHEMICAL CORPORATION

KAISER REFRACTORIES

Kaiser Center, 300 Lakeside Drive, Oakland 12, California

KAISER REFRACTORIES

M-BLOCK

Kaiser Refractories M-BLOCK insulation provides high thermal efficiency and mechanical strength from room temperatures to 1900 F.

HIGHEST QUALITY

Kaiser Refractories M-Block is made from chemically stable mineral fiber and other selected high temperature insulators. It combines physical stability and high thermal efficiency with a wide range of convenient sizes to provide the industrial user with a single, easily worked insulation for every application.

EASY TO INSTALL

Light weight, low density M-Block is available in thicknesses up to 4 inches. Most installations will require only one layer, providing reduced installation cost and increased efficiency. Due to its high mechanical strength, M-Block requires a minimum of reinforcement. It is easily cut with knife or saw to form any shape, and it can be pressed over projections without cutting. The embossed surface of M-Block provides a strong grip for insulating cement finishes.

RESISTANT TO MOISTURE

In refractory back-up insulation, Kaiser Refractories M-Block is often used in conjunction with castables. The water repellent surface reduces excessive absorption of water needed for proper hydration of cements and castable refractories.

RECOMMENDED THICKNESSES

Operating temperatures, cost of fuel, operating time, ambient temperature and other factors determine the most economical thickness for block insulation. The following table, taken from U.S. Department of Commerce Commercial Standards CS-117, offers a practical guide for typical applications—and maximum efficiency.

Operating Temperatures	Thickness of M-Block	Operating Temperatures	Thickness of M-Block
Up to 200 F.	1"	700 to 900 F.	3½"
200 to 400	1½"	900 to 1100	4"
400 to 500	2"	1100 to 1300	4½"
500 to 600	2½"	1300 to 1500	5"
600 to 700	3"	1500 to 1600	5½"

APPLICATIONS

Blast Furnace Stoves • Refractory Back-up • Ceramic Kilns • Tanks • Towers • Ovens
Fan Housings • Boiler Walls • Melting Tanks • Annealing Pits • Hot Air Ducts • Heat
Treating Furnaces • Chilling Pits • Turbines • Pit Covers • Breechings

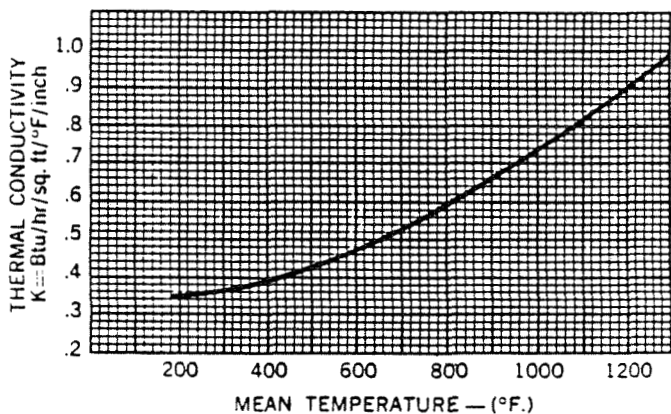
PHYSICAL PROPERTIES

Temperature Range	Up to 1900°F.
Thermal Conductivity	See graph below
Compressive Strength	18 psi
Breaking Strength (10" span)	30 lbs. per inch thick
Shrinkage @ 1900°F. (lineal)	1.9%
Density	1.25 lbs. per bd. ft.
Stability	Inert, durable
Resistance to Moisture	Water repellent
Resistance to Corrosion	Noncorrosive
Handling Characteristics	Durable; Cleaner, less dusting

Kaiser Refractories M-Block Insulation complies with performance requirements of ASTM Specification C-392 Class 2, Federal Specification HH-1-564, and Commercial Standards CS-117 of the U.S. Department of Commerce.

THERMAL CONDUCTIVITY

Pure mineral fibers combined with binder and other materials produce a product of low thermal conductivity and high refractoriness. M-Block insulation possesses the necessary dead air space, light weight and durability that makes a truly good insulating material. Its density is 15 to 16 pounds per cubic foot. In checking the thermal conductivity chart below it is readily apparent that M-Block Insulation is an outstanding insulating material for your heated equipment.



ECONOMICAL

Kaiser Refractories M-Block insulation costs less per board foot than many insulators of inferior thermal value and temperature range. Material, construction and maintenance costs are less, as are fuel costs. In fact, M-Block insulation will pay for itself in a short period of time in fuel savings alone. M-Block's durability and high efficiency insure sustained savings throughout the long life of the material.

PACKAGING DATA — KAISER REFRACTORIES M-BLOCK INSULATION

Standard Sizes		Standard Thicknesses						
		1"	1½"	2"	2½"	3"	3½"	4"
6" x 18"	Pieces/Ctn.	48	32	24	20	16	12	12
	Sq. ft./Ctn.	36	24	18	15	12	9	9
	Bd. ft./Ctn.	36	36	36	37.5	36	31.5	36
	Weight/Ctn. (lbs.)	45	45	45	45	45	39.5	45
6" x 36"	Pieces/Ctn.	24	16	12	10	8	6	6
	Sq. ft./Ctn.	36	24	18	15	12	9	9
	Bd. ft./Ctn.	36	36	36	37.5	36	31.5	36
	Weight/Ctn. (lbs.)	45	45	45	45	45	39.5	45
12" x 18"	Pieces/Ctn.	24	16	12	10	8	6	6
	Sq. ft./Ctn.	36	24	18	15	12	9	9
	Bd. ft./Ctn.	36	36	36	37.5	36	31.5	36
	Weight/Ctn. (lbs.)	45	45	45	45	45	39.5	45
12" x 36"	Pieces/Ctn.	12	8	6	5	4	3	3
	Sq. ft./Ctn.	36	24	18	15	12	9	9
	Bd. ft./Ctn.	36	36	36	37.5	36	31.5	36
	Weight/Ctn. (lbs.)	45	45	45	45	45	39.5	45
18" x 24"	Pieces/Ctn.	12	8	6	6	4	4	3
	Sq. ft./Ctn.	36	24	18	18	12	12	9
	Bd. ft./Ctn.	36	36	36	45	36	42	36
	Weight/Ctn. (lbs.)	45	45	45	56	45	52.5	45
24" x 36"	Pieces/Ctn.	6	4	3	3	2	2	2
	Sq. ft./Ctn.	36	24	18	18	12	12	12
	Bd. ft./Ctn.	36	36	36	45	36	42	48
	Weight/Ctn. (lbs.)	45	45	45	56	45	52.5	60

*Packaged in telescope type carton, not Tear-Tape.

SPECIAL SIZES: Write for prices and packaging on non-standard sizes and thicknesses not tabulated above.

TEAR-TAPE CARTON CONVENIENCE

M-Block insulation is packaged in handy tear-tape cartons that simply zip in half, baring the contents for easy removal. No flaps to hinder access. Two men can work from one carton.



Start tab; pull tape completely around carton, leaving base as holding tray.



Note ease with which M-Block can be removed from base for ready use.

JOB-MATCHED KAISER REFRACTORIES INSULATING PRODUCTS

Plastic Insulation

A dry mixture of high-temperature mineral fibers combined with other ingredients. Provides great adhesiveness and workability; resistance to severe usage and vibration; practically no shrinkage; high insulating value in service to 1800 F. Applied over block or blanket insulations, it provides a monolithic surface.

Hard-Top®

A hydraulic setting insulating and finishing cement. Designed for use on heating equipment of all types—valves, fittings, pipes, etc. Used as a one-coat finish over block and blanket insulation where temperatures do not exceed 1200 F. Sets up hard, without heat.

Vee-Block Mix

Extremely lightweight, vermiculite-base, castable insulation material. Weights only 24 lbs. per cu. ft., installed. Provides approximately same thermal conductivity as block insulation. Highly efficient insulation up to 1600°F.

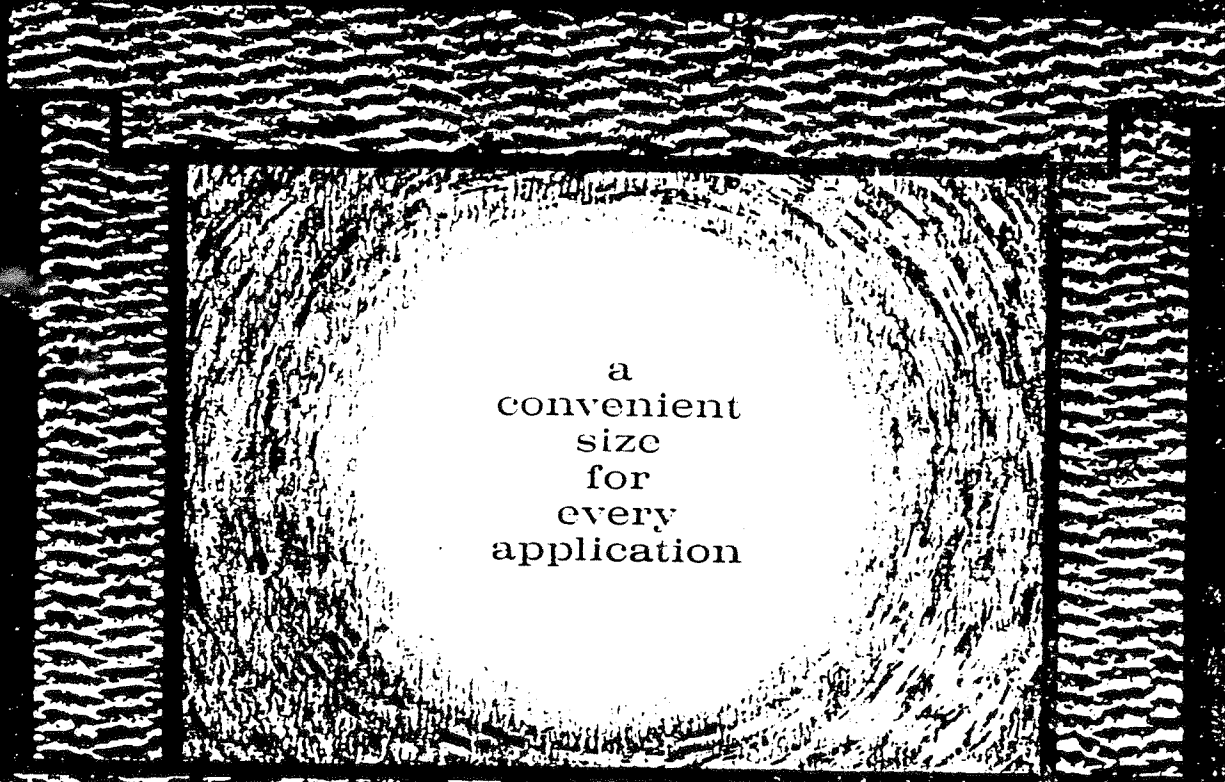
INSULATING CASTABLES

Product Name	ASTM Classification	Service Temperature Limit °F	Packaging	Material Required for Casting 1 Cu. Ft.	Method of Application	Water Required for Casting, %
I.R.C.	Q	2500	50 lb. Bag	70-80 lbs.	Cast or Gunned	40-47
ONE SHOT	Q	2400	50 lb. Bag	87-90 lbs.	Cast or Gunned	31-35
PURO-LITE	P	2250	50 lb. Bag	48-52 lbs.	Cast or Gunned	55-60
I.R.C.-22	P	2200	50 lb. Bag	48-50 lbs.	Cast or Gunned	40-47
I.R.C.-20	N	1800	50 lb. Bag	46-48 lbs.	Cast	46-55
I.R.C.-20-G	N	1800	50 lb. Bag	—	Gunned	—
PLASTIC INSULATION	*	1800	50 lb. Bag	24 lbs.	Troweled	190-200
VEE-BLOCK MIX	Special	1600	50 lb. Bag	24 lbs.	Cast	170-200

*Complies with requirements of ASTM C-195.

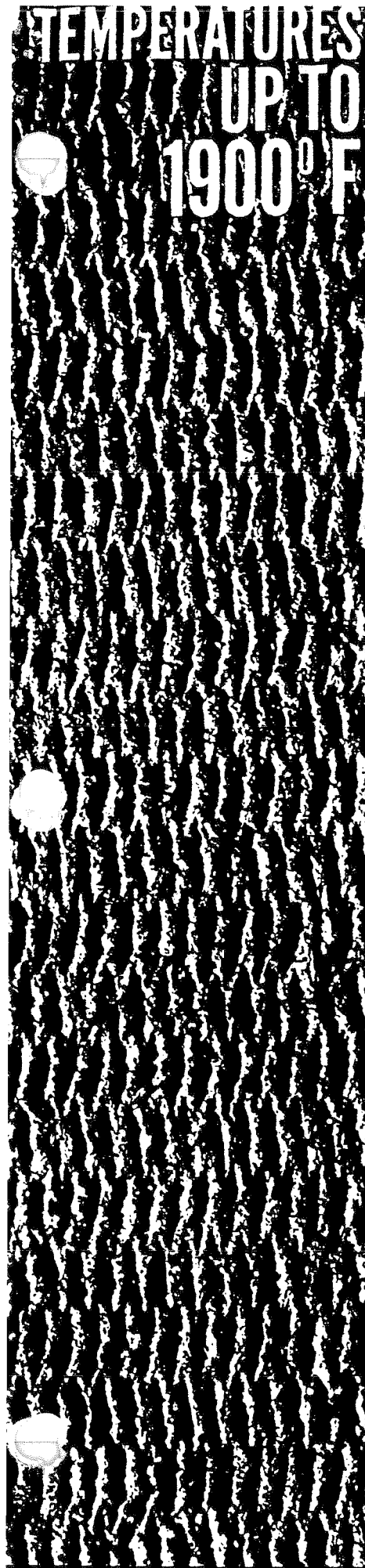
KAISER REFRACTORIES

M-BLOCK INSULATION



a
convenient
size
for
every
application

KAISER
REFRATORIES



Kaiser M-BLOCK

Insulation provides high thermal efficiency and mechanical strength from room temperatures to 1900° F.

HIGHEST QUALITY

Kaiser M-Block is made from chemically stable mineral fiber and other selected high temperature insulators. It combines physical stability and high thermal efficiency with a wide range of convenient sizes to provide the industrial user with a single, easily worked insulation for every application.

EASY TO INSTALL

Light weight, low density Kaiser M-Block is available in thicknesses up to 4 inches. Most installations will require only one layer, providing reduced installation cost and increased efficiency. Due to its high mechanical strength, Kaiser M-Block requires a minimum of reinforcement. It is easily cut with knife or saw to form any shape, and it can be pressed over projections without cutting. The embossed surface of Kaiser M-Block provides a strong grip for insulating cement finishes.

RESISTANT TO MOISTURE

In refractory back-up insulation M-Block is often used in conjunction with castables. The water repellent surface reduces excessive absorption of water needed for proper hydration of cements and castable refractories.

RECOMMENDED THICKNESSES

Operating temperatures, cost of fuel, operating time, ambient temperature and other factors determine the most economical thickness for block insulation. The following table, taken from U. S. Department of Commerce Commercial Standards CS-117, offers a practical guide for typical applications — and maximum efficiency.

Operating Temperatures	Thickness of M-Block	Operating Temperatures	Thickness of M-Block
Up to 200 F.	1"	700 to 900	3½"
200 to 400	1½"	900 to 1100	4"
400 to 500	2"	1100 to 1300	4½"
500 to 600	2½"	1300 to 1500	5"
600 to 700	3"	1500 to 1600	5½"

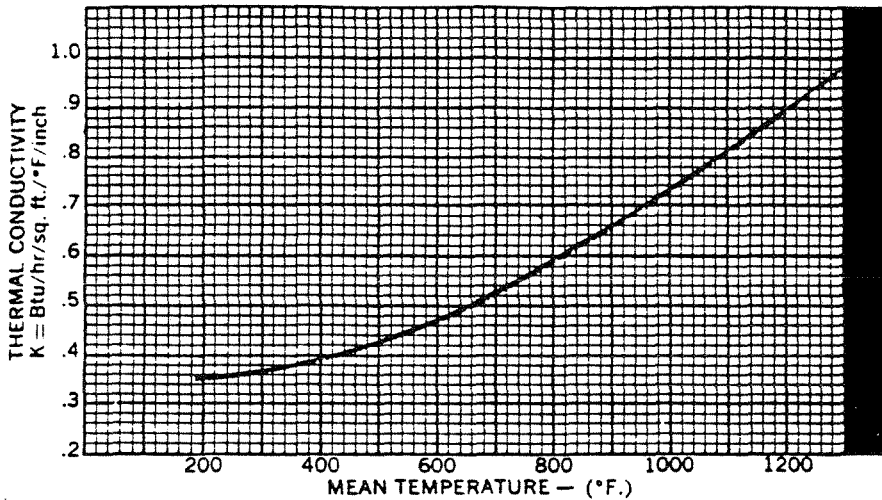
PHYSICAL PROPERTIES

Temperature Range	Up to 1900° F.
Thermal Conductivity	See Graph
Compressive Strength	18 psi
Breaking Strength (10" span)	30 lb. per inch thick
Shrinkage at 1900° F. (lineal)	1.9%
Density	1.8 lb. per bd. ft.
Stability	Inert, durable
Resistance to Moisture	Water repellent
Resistance to Corrosion	Noncorrosive
Handling Characteristics	Cleaner, less dusting

Kaiser M-Block Insulation complies with performance requirements of ASTM Specification C-392 Class 2, Federal Specification HH-1-564, and Commercial Standards CS-117 of the U. S. Department of Commerce.

THEMAL CONDUCTIVITY

Pure mineral fibers combined with binder and other materials produce a product of low thermal conductivity and high refractoriness. Kaiser M-Block Insulation possesses the necessary dead air space, light weight and durability that make a truly good insulating material. Its density is 21 to 22 pounds per cubic foot; in checking the thermal conductivity chart below it is readily apparent that Kaiser M-Block Insulation is an outstanding insulating material for your heated equipment.



ECONOMICAL

Kaiser M-Block Insulation costs less per board foot than many insulators of inferior thermal value and temperature range. Material, construction and maintenance costs are less, as are fuel costs. In fact, Kaiser M-Block Insulation will pay for itself in a short period of time in fuel savings alone. M-Block's durability and high efficiency insure sustained savings throughout the long life of the material.

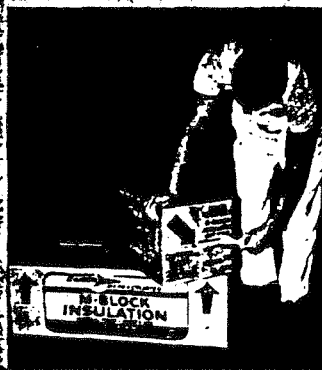
APPLICATIONS

- | | |
|----------------------|------------------------|
| Blast Furnace Stoves | Melting Tanks |
| Refractory Back-up | Annealing Pits |
| Ceramic Kilns | Hot Air Ducts |
| Tanks | Heat Treating Furnaces |
| Towers | Chilling Pits |
| Ovens | Turbines |
| Fan Housings | Pit Covers |
| Boiler Walls | Breechings |

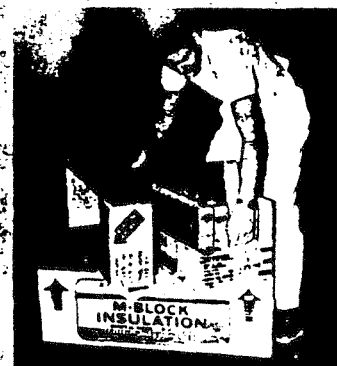
TEAR-TAPE CARTON CONVENIENCE

Kaiser M-Block is packaged in handy, tear-tape cartons that simply zip in half, baring the contents for easy removal. No flaps to hinder access. Two men can work from one carton.

Start tab — pull tape completely around the carton.



Lift top half of carton from M-Block Insulation.



Note the ease with which M-Block can be removed from carton.

KAISER M-BLOCK INSULATION / packaging data

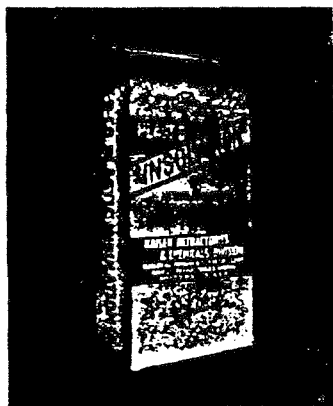
STANDARD SIZES		STANDARD THICKNESSES					
		1"	1½"	2"	2½"	3"	3½"
6" x 18"	Pieces/Ctn.	48	32	24	20	16	12
	Sq. ft./Ctn.	36	24	18	15	12	9
	Bd. ft./Ctn.	36	36	36	37.5	36	31.5
	Weight Ctn. (lbs.)	65	65	65	65	65	56
6" x 36"	Pieces Ctn.	24	16	12	10	8	6
	Sq. ft. Ctn.	36	24	18	15	12	9
	Bd. ft. Ctn.	36	36	36	37.5	36	31.5
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12" x 18"	Pieces Ctn.	24	16	12	10	8	6
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	Weight Ctn. (lbs.)	65	65	65	65	65	56
18" x 24"	Pieces Ctn.	12	8	6	6	4	4
	Sq. ft. Ctn.	36	24	18	18	12	12
	Bd. ft. Ctn.	36	36	36	45	36	42
	Weight Ctn. (lbs.)	65	65	65	81	65	76
18" x 36"	Pieces Ctn.	6	4	3	3	2	2
	Sq. ft. Ctn.	27	18	13.5	13.5	9	9
	Bd. ft. Ctn.	27	27	27	33.75	27	31.5
	Weight Ctn. (lbs.)	50	50	50	60	50	56
24" x 36"	Pieces Ctn.	6	4	3	3	2	2
	Sq. ft. Ctn.	36	24	18	18	12	12
	Bd. ft. Ctn.	36	36	36	45	36	42
	Weight Ctn. (lbs.)	65	65	65	81	65	76

* Packaged in telescope type carton - not Tear-Tape

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JOB-MATCHED KAISER INSULATING PRODUCTS



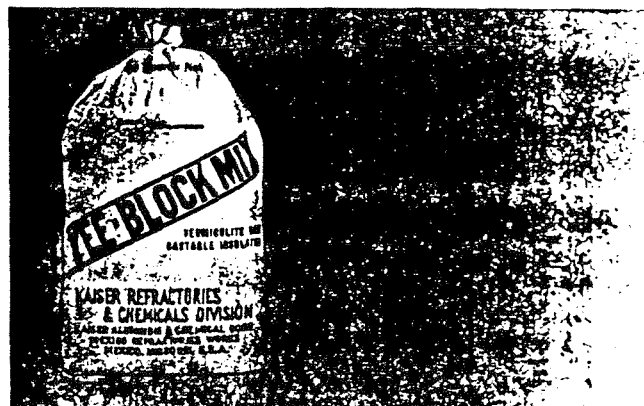
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HARD-TOP *

A hydraulic-setting insulating and finishing cement. Designed for use on heated equipment of all types, valves, fittings, etc. Kaiser HARD-TOP Insulating Cement is used as a one-coat finish over block and blanket insulation. Sets up hard without heat being applied.



VEE-BLOCK MIX *

Kaiser VEE-BLOCK MIX is an extremely light-weight vermiculite base castable insulation material. Installed weight is only 24 pounds per cubic foot. It possesses approximately the same thermal conductivity as block insulation. A highly efficient insulation up to 1600° F.

*TRADE NAME

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I-R-C 20-G* I-R-C 20-G is recommended where it is desirable to install lightweight insulating castable by gunning. It is sized specifically for gun application; otherwise, it possesses most of the characteristics of I-R-C 20. It is widely used as the back-up insulation layer (with Hi-Strength* refractory castable) in gunned duo-component linings. It is shipped in 50-pound bags.

HARD-TOP* Hard-Top is a hydraulic-setting insulating and finishing cement designed for use on heated equipment of all types, including valves, fittings and pipes. It is commonly used as a one-coat finish over block and blanket insulation where temperatures do not exceed 1200°F. Sets up hard, without heat.

VEE-BLOCK MIX* Vee-Block Mix is an extremely lightweight, vermiculite-base castable insulation material with an installed weight of only 24 pounds per cubic foot. It provides approximately the same thermal conductivity as block insulation. Vee-Block Mix provides a highly efficient insulation up to 1600°F. It is ideal for single coat applications in such furnace locations as walls, roofs, soot hoppers, arches, and other similar areas.

M-BLOCK* M-Block is a lightweight, low density insulating block designed for applications up to 1900°F. Manufactured of chemically stable mineral fiber, M-Block combines low thermal conductivity, mechanical strength and durability, with high refractoriness. Available in thicknesses up to 4 inches, M-Block is furnished in a wide range of convenient sizes to provide a single, easily worked insulation for most every application.

INSULATING FIREBRICK Kaiser Refractories' seven brands of insulating firebrick combine excellent insulating properties with the ability to withstand direct exposure to flame, heat and furnace atmospheres. They are available in a temperature use range from 1600°F. to 3000°F. in standard and special shapes — all accurate in size.

*TRADEMARKS KAISER ALUMINUM & CHEMICAL CORPORATION

KAISER REFRACTORIES

Kaiser Center, 300 Lakeside Drive, Oakland 12, California

M-16

M-20

M-23

M-26

M-28

M-30

KAISER
INSULATING
REFRACTORIES

KAISER
REFRACTORIES

KAISER INSULATING MATERIALS

A wide variety of Kaiser insulating materials — mortars, castables, finishing cement and block insulation — are available to meet various insulating needs.

 <p>KAISER M-5 An air-setting, high temperature mortar, M-5 was developed for laying and coating insulating firebrick. It has high tensile strength, a high fusion point, and forms a permanent ceramic bond that provides a properly sealed, heat-retardant bond. Only 850-400 pounds are required to lay 1,000 insulating brick.</p>	 <p>KAISER PLASTIC INSULATION Plastic Insulation is a dry mixture of high temperature mineral wool fiber and other ingredients, designed to provide an easily moldable insulation. It is recommended for insulating valves, large piping, flanges, steam gates, flues, ducts, boiler setting tanks, heaters, furnaces — any hot surface up to 1800° F. where heat savings is worthwhile.</p>	 <p>KAISER HARD-TOP Hard-Top is a hydraulic-setting insulating and finishing cement designed for use on heated equipment of all types, including valves, fittings and pipes. It is commonly used as a one-coat finish over block and brick insulation where temperatures do not exceed 1800° F. Sets up hard, without heat.</p>
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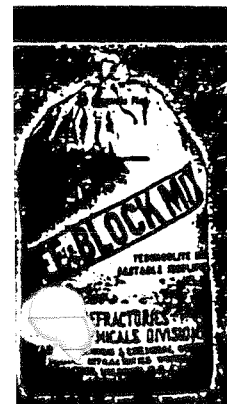


KAISER I-R-C*
I-R-C combines the advantages of a mix-and-pour castable with those of an insulating concrete. It is lightweight, easily mixed and poured, and will not shrink on drying. I-R-C is ideal for lining breechings, flues, roofs, hearths, door linings and many others. It is usable up to 2500° F.; 78-80 pounds required per cubic foot.

I-R-C GUNNING MIXES
Both I-R-C and I-R-C 20 lightweight castable refractory products are available in specially prepared mixes designed for air emplacement. Where gunning application is preferred — specify I-R-C G or I-R-C 20-G at time of ordering. Consult the specialty department for recommendations and application details — no obligation.

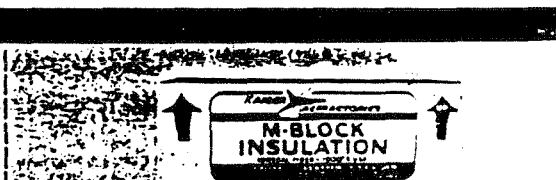


KAISER I-R-C 20*
I-R-C 20 is similar to I-R-C except it is lighter in weight and has greater insulating properties. Installed weight ranges between 46-60 pounds per cubic foot with thermal conductivity 70% less than firebrick. It can be cast or troweled. I-R-C 20 is designed for use up to 1800° F. Shipped in 50 pound bags.



KAISER VEE-BLOCK MIX*
Vee-Block Mix is an extremely lightweight, vermiculite base castable insulation material with an installed weight of only 24 pounds per cubic foot. It provides approximately the same thermal conductivity as block insulation. Vee-Block Mix provides a highly efficient insulation up to 1600° F. It is ideal for single coat applications in such furnace locations as walls, roofs, soot choppers, arches, and other similar areas.

KAISER VEE-BLOCK*
Vee-Block is a vermiculite block insulation designed for applications up to 1800° F. It is lightweight, retains its strength at high temperatures, and shrinkage is negligible. Vee-Block can be easily sawed to fit odd shapes, areas and contours. It has an extremely low coefficient of heat transfer. Furnished in blocks to 6" thicknesses, any size up to 12' x 6' x 6". Shipped in 40 lb. cartons.



KAISER M-BLOCK*
M-Block is a lightweight, low density insulating block designed for applications up to 1900° F. Manufactured of chemically stable mineral fiber, M-Block combines low thermal conductivity, mechanical strength and durability, with high refractoriness. Available in thicknesses up to 4 inches. M-Block is furnished in a wide range of convenient sizes to provide a single, easily worked insulation for most every application.



For Performance Dividends...
USE and SPECIFY
KAISER
REFRACTORY
CASTABLES

KAISER REFRACTORIES & CHEMICALS DIVISION

KAISER ALUMINUM & CHEMICAL SALES, INC.

KAISER INSULATING MATERIALS

A wide variety of Kaiser insulating materials — mortars, castables, finishing cement and block insulation — are available to meet various insulating needs.



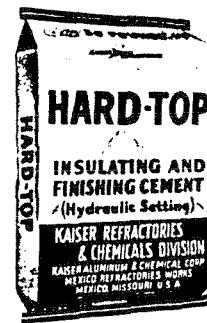
KAISER M-5*

An air-setting, high temperature mortar, M-5 was developed for laying and coating insulating firebrick. It has high tensile strength, a high fusion point, and forms a permanent ceramic bond that provides a properly sealed, heat retardant bond. Only 350-400 pounds are required to lay 1000 insulating brick.



KAISER PLASTIC INSULATION*

Plastic Insulation is a dry mixture of high temperature mineral wool fiber and other ingredients, designed to provide an easily moldable insulation. It is recommended for insulating valves, large piping, flanges, steam gates, flues, ducts, boiler setting tanks, heaters, furnaces — any hot surface up to 1800°F. where heat saving is worthwhile.



KAISER HARD-TOP*

Hard-Top is a hydraulic-setting insulating and finishing cement designed for use on heated equipment of all types, including valves, fittings and pipes. It is commonly used as a one-coat finish over block and blanket insulation where temperatures do not exceed 1200°F. Sets up hard, without heat.



KAISER I-R-C*

I-R-C combines the advantages of a mix-and-pour castable with those of an insulating concrete. It is lightweight, easily mixed and poured, and will not shrink on drying. I-R-C is ideal for lining breechings, flues, roofs, hearths, door linings and many others. It is usable up to 2500°F.; 78-80 pounds required per cubic foot.

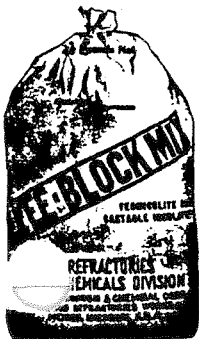
I-R-C GUNNING MIXES

Both I-R-C and I-R-C 20 lightweight castable refractory products are available in specially prepared mixes designed for air emplacement. Where gunning application is preferred — specify I-R-C G or I-R-C 20-G at time of ordering. Consult the specialty department for recommendations and application details — no obligation.



KAISER I-R-C 20*

I-R-C 20 is similar to I-R-C except it is lighter in weight and has greater insulating properties. Installed weight ranges between 46-48 pounds per cubic foot, with thermal conductivity 70% less than fireclay brick. It can be cast or troweled. I-R-C 20 is designed for use up to 1800°F. Shipped in 50-pound bags.

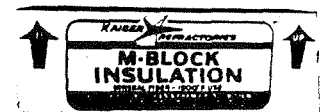


KAISER VEE-BLOCK MIX*

Vee-Block Mix is an extremely lightweight, vermiculite-base castable insulation material with an installed weight of only 24 pounds per cubic foot. It provides approximately the same thermal conductivity as block insulation. Vee-Block Mix provides a highly efficient insulation up to 1600°F. It is ideal for single coat applications in such furnace locations as walls, roofs, soot hoppers, arches, and other similar areas.

KAISER VEE-BLOCK*

Vee-Block is a vermiculite block insulation designed for applications up to 1800°F. It is lightweight, retains its strength at high temperatures, and shrinkage is negligible. Vee-Block can be easily sawed to fit odd shapes, areas and contours; it has an extremely low coefficient of heat transfer. Furnished in 1" to 6" thicknesses, any size up to 12" x 36". Shipped in cartons.

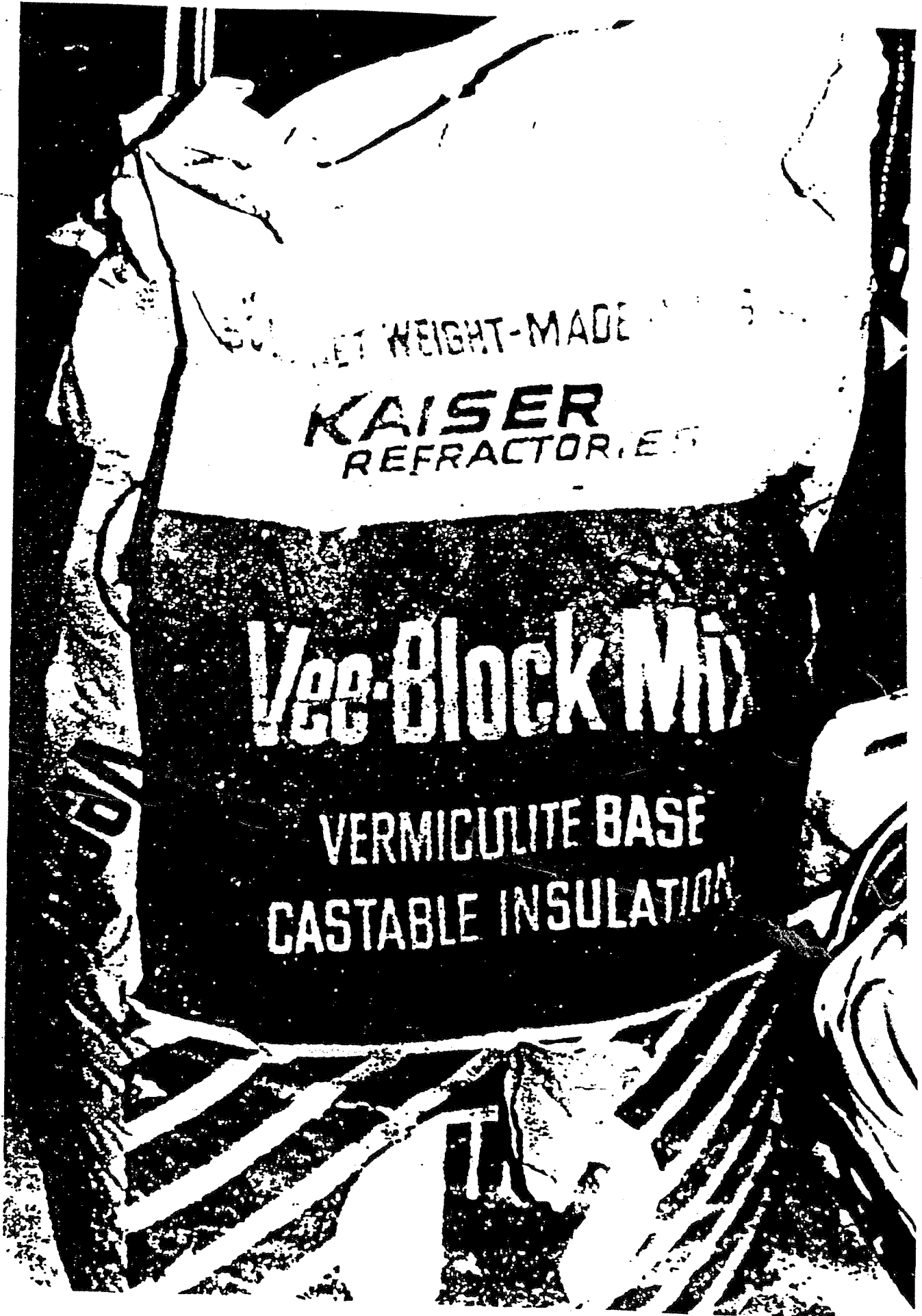


KAISER M-BLOCK*

M-Block is a lightweight, low density insulating block designed for applications up to 1900°F. Manufactured of chemically stable mineral fiber, M-Block combines low thermal conductivity, mechanical strength and durability, with high refractoriness. Available in thicknesses up to 4 inches. M-Block is furnished in a wide range of convenient sizes to provide a single, easily worked insulation for most every application.

KAISER ALUM + CHEM CORP.

- Plastic K-N: Dark-colored, wet, dense, pliable, moldable refractory. (1974) (Didn't release airborne ash because it was a wet product.)
- K/R1202: A direct-bonded basic refractory brick (non-asbestos) but did supply the brick to certain customers. Asbestos-containing paper after 74-78 which then covered metal casing but not within geographic area.
- Coelex 60 Unitab Liners: Supplied asbestos paper sold to cement for use in the interior burn areas of rotary kilns. Mid-1960s to 1970s. Sold 1959-72.
- K/R M-Block Insulation: Sold by K/R only. Packaged and manufactured by others.
(Manufacturer: M.H. Detrick Co., 1939-64)
(Manufacturer: C-E Refractories, 1970-74)
(Manufacturer: Keene Corp., 1974-84)
- K/R Hard-Top Finishing Cement: Sold from 1959-1972.
(Manufacturer: M.H. Detrick Co., 1956-64)
(Manufacturer: Refractories & Insulation Corp., 1964-70)
(Manufacturer: C-E Refractories Division, 1970-74)
(Manufacturer: Keene Corp., 1974-Dec. 31, 1984)
- K/R Plastic Insulation: Sold from 1959-1972.
(Manufacturer: M.H. Detrick Co., 1956-64)
(Manufacturer: Refractories & Insulation Corp., 1964-70)
(Manufacturer: C-E Refractories Division, 1970-74)
- K/R Vee Block Insulation: 1959-mid 74.
- K/R Vee Block Mix: 1959-74.
- K/R Super D Block Insulation: 1971-74.



SPECIAL WEIGHT-MADE

KAISER
REFRACTORIES

Vee-Block Mix

VERMICULITE BASE
CASTABLE INSULATION

KAISER REFRACTORIES; Vermiculite Vee-Block Mix

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JENNIFER A. KUENSTER, State Bar No. 104607
THELEN, MARRIN, JOHNSON & BRIDGES LLP
Two Embarcadero Center, Suite 2100
San Francisco, California 94111
Telephone: (415) 392-6320

Attorneys for Defendant
KAISER ALUMINUM & CHEMICAL CORPORATION

AmB
FILED
JUN 13 2013
COURT CLERK
SAN FRANCISCO

SUPERIOR COURT OF THE STATE OF CALIFORNIA
IN AND FOR THE COUNTY OF SAN FRANCISCO

IN RE:

COMPLEX ASBESTOS LITIGATION

NO. 828684

KAISER ALUMINUM & CHEMICAL CORPORATION'S SECOND SUPPLEMENTAL RESPONSES TO PLAINTIFFS' STANDARD INTERROGATORIES TO ALL DEFENDANTS PURSUANT TO GENERAL ORDER 129; INTERROGATORY NOS. 10, 13, 19, 22 and 29

SUPPLEMENTAL RESPONSES TO INTERROGATORY NOS. 10, 13, 19, 22 and 29

INTERROGATORY NO. 10:

IDENTIFY the person or persons most knowledgeable about:

- A. YOUR acquisition of RAW ASBESTOS and/or ASBESTOS CONTAINING PRODUCTS;
- B. YOUR use of RAW ASBESTOS and/or ASBESTOS CONTAINING PRODUCTS;
- C. YOUR contracting with others to do work involving use or handling of

1 RAW ASBESTOS or ASBESTOS CONTAINING PRODUCTS.

2 **SECOND SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 10:**

3 Last known address for those persons identified in Response to Interrogatory No. 10 are as
4 follows:

- 5 1. Ted Aucoin - 105 Whimby Drive, Slidell, LA 70461
- 6 2. William Crates - 14200 S.E. 272nd Street, Kent, WA 98042
- 7 3. G. Stan Fergin - South 3828 Tekoa, Spokane, WA 99203
- 8 4. Mark W. Jones - 3400 Taylor Way, Takoma, WA 98421
- 9 5. William Carey Salassi - 6 Irving Drive, Ponchatoula, LA 70454
- 10 6. Kenneth Shaw - 1615 Washington Street, East, Charleston, WV 25311
- 11 7. M.A. Peters - 210 Blue Ridge Road, Plymouth Meeting, Pennsylvania 19462

12 **INTERROGATORY NO. 13:**

13 For each of the following, please state whether, at any time within the time frame or until
14 such time as any defendant which had been engaged in MARKETING RAW ASBESTOS or
15 ASBESTOS- CONTAINING PRODUCTS discontinued the MARKETING of such products,
16 THIS DEFENDANT was a member or paid dues for any representative of THIS DEFENDANT
17 (excluding faculty members of educational institutions) to be a member of the following:

- 18 A. American Conference of Governmental Industrial Hygienists;
- 19 B. American Industrial Hygiene Association;
- 20 C. American Petroleum Institute;
- 21 D. American Railroad Association;
- 22 E. Asbestos Cement Producers Association;
- 23 F. Asbestos Information Association (AIA)(please answer through date of
24 your answers);
- 25 G. Asbestos Information Association/North America (AIA/NA)(please answer
26 through date of your answers);
- 27 H. Asbestos Textile Institute (ATI);

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- I. Industrial Hygiene Foundation and/or Industrial Health Foundation (IHF);
- J. Industrial Mineral Insulation Manufacturers Institute;
- K. Magnesia Insulation Manufacturers' Association;
- L. Magnesia Silica Insulation Manufacturers Association;
- M. Mineral Wool Institute;
- N. National Insulation Manufacturers Association (NIMA);
- O. National Safety Council;
- P. New York Academy of Sciences;
- Q. Quebec Asbestos Mining Association (QAMA);
- R. Refractories Institute;
- S. Safe Building Alliance (please answer through date of your answers);
- T. Thermal Insulation Manufacturers Association (TIMA);
- U. U.S. Maritime Commission;
- V. IDENTIFY any other organizations, associations or groups of manufacturers, miners, distributors, importers, labelers, suppliers, and/or sellers of ASBESTOS-CONTAINING PRODUCTS of which THIS DEFENDANT was a member;
- W. IDENTIFY any such representative of THIS DEFENDANT.

SECOND SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 13:

After a diligent search and reasonable inquiry, Kaiser Aluminum has not been able to reconstruct from information reasonably available to it the actual years during which the persons identified in Supplemental Response to Interrogatory No. 13 served on the Committees mentioned in that Response. Based upon information reasonably available to it, Kaiser Aluminum believes that:

James P. Hughes served on the Medical Committee of the IHF during at least 1963 and 1964, but not before 1960 or after 1966.

H.K. Lambie served on the Metals Section of the NSC in the 1950's and 1960's, but not before 1951.

1 J.F. Knight served on committees of the Board of TRI or on the Board itself from at least
2 1966 through the late 1970s.

3 H.M. Nelson served on committees of the Board of TRI or on the Board itself from at least
4 1969 through 1979.

5 C.E. Lindsay served on committees of the Board of TRI during the 1970's.
6 Plaintiff may ascertain the actual dates of Board or Board committee membership of these
7 individuals by reviewing Annual Reports and membership rosters of the IHF, NSC and TRI.

8 **INTERROGATORY NO. 19:**

9 With the exception of OSHA compliance, had THIS DEFENDANT (except for a
10 defendant that is an educational institution) prior to 1980 exchanged DOCUMENTS or
11 communicated with any person or other COMPANY expressly regarding the results of tests and/or
12 studies relating to asbestos exposure in the workplace or the human health consequences of
13 exposure to asbestos? If so, state:

14 A. Each person or COMPANY with whom the information was exchanged or
15 to whom it was communicated;

16 B. The date(s) of any such exchanges or communications;

17 C. The IDENTITY of the custodian of such DOCUMENTS.

18 **SECOND SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 19:**

19 Kaiser Aluminum has not yet located any specific document covered by this Interrogatory
20 that it is withholding on a claim of privilege. However, Kaiser Aluminum reserves the right to
21 withhold on the basis of a claim of attorney-client or work product privilege any covered
22 communication that occurred between it and any person or entity for purposes of the defense of
23 any pending or anticipated legal claim against Kaiser Aluminum if any such document is
24 discovered. Kaiser Aluminum will identify any such document that is actually withheld on a claim
25 of privilege.

26 **INTERROGATORY NO. 22:**

27 Has THIS DEFENDANT (except for a defendant that is an educational institution)

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1 conducted, or caused to be conducted, any tests and/or studies on ambient asbestos dust levels at
2 any location or job site where ASBESTOS-CONTAINING PRODUCTS were installed, utilized
3 or removed? If so, for the first 5 tests and/or studies, state:

4 A. The location, including name and address, at which each such test and/or
5 study was conducted;

6 B. The individual(s) or entity conducting each such test and/or study;

7 C. The date of each such test and/or study;

8 D. Whether THIS DEFENDANT has any DOCUMENTS containing the
9 results and/or conclusions of each such test and/or study;

10 E. The IDENTITY of the custodian of such DOCUMENTS.

11 **SECOND SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 22:**

12 The earliest available documents pertaining to air sampling by Kaiser Aluminum for
13 respirable asbestos fibers are attached hereto as Exhibit A.

14 **INTERROGATORY NO. 29:**

15 If YOUR answer to any of subparts of Interrogatory 28 regarding RAW ASBESTOS is in
16 the affirmative, state:

17 A. The trade, brand name, and/or generic name of such RAW ASBESTOS
18 milled or MARKETED in any form or quantity between 1930 and 1985;

19 B. The date(s) such RAW ASBESTOS was first placed on the market,
20 including the date(s) such RAW ASBESTOS was first marketed;

21 1. On an experimental basis;

22 2. On a test basis;

23 3. For sale.

24 C. The date(s) such RAW ASBESTOS:

25 1. Ceased to be produced; or

26 2. Was recalled from the market, if ever.

27 D. A description of the chemical composition of such RAW ASBESTOS,

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1 including the type and/or grade of asbestos;

2 E. A description of the physical appearance and nature of such RAW
3 ASBESTOS, including any color coding, distinctive marking and/or logo on the packaging or
4 container;

5 F. A detailed description of the intended use of such RAW ASBESTOS,
6 including any temperature limits for each such use;

7 G. Whether such RAW ASBESTOS was on the U.S. Government's "Qualified
8 Products List," and if so, the inclusive dates it was on such list;

9 H. IDENTIFY to whom such RAW ASBESTOS has, at any time, been sold.
10 As to each such, state:

11 I. Whether any of THIS DEFENDANT's RAW ASBESTOS has, at any time,
12 been sold, shipped, or otherwise distributed, used or installed to or at any COMPANY (including
13 power company or utility), governmental agency or entity, shipyard, distributor, refinery,
14 contractor, supplier, PREMISE owner or occupant, ship owner, or other PREMISE or site in the
15 GEOGRAPHIC AREA and whether any of THIS DEFENDANT's RAW ASBESTOS has at any
16 time, been sold to any manufacturer, or manufacturing facility, of ASBESTOS-CONTAINING
17 PRODUCTS. If so, state:

18 1. The names of each such COMPANY, governmental agency or
19 entity, shipyard, distributor, supplier, manufacturer or refinery;

20 2. The inclusive dates of each such sale, and the amount (quantity) and
21 the trade brand name of such RAW ASBESTOS sold;

22 3. The manner of shipment (e.g. boat, rail, etc.).

23 4. Whether you have any records indicating any such sale or shipment
24 and, if so, the name, address and job classification of each person who currently has possession of
25 such records.

26 5. Either (1) attach all DOCUMENTS evidencing the information
27 sought in this Interrogatory and its subparts to your answers to these Interrogatories, or (2) attach

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1 disks containing such data, or (3) describe such DOCUMENTS with sufficient particularity that
2 they may be made the subject of a request for production of documents.

3 **SECOND SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 29:**

4 After diligent investigation, Kaiser Aluminum further answers Interrogatory No. 29
5 regarding the limited transactions in asbestos fibers by a former subsidiary, Kaiser Trading
6 Company, as follows:

7 A and D: Various grades of chrysotile asbestos fiber, including 7D, 7DS, 7M and
8 7MS.

9 B and C: Kaiser Aluminum believes that the Kaiser Trading Company commenced
10 marketing of the chrysotile asbestos fibers after July of 1978 and ceased marketing of any
11 chrysotile asbestos fibers by the end of 1978.

12 E: The chrysotile asbestos fibers were packaged in pulpable paper bags with warning
13 signs stamped on each bag. Kaiser Aluminum does not have further information responsive to this
14 inquiry.

15 F. Unknown.

16 G. Due to the limited nature and short duration of the transactions in chrysotile
17 asbestos fibers by the former Kaiser Trading Company, Kaiser Aluminum does not believe that the
18 chrysotile asbestos fibers were placed on the "Qualified Products List" of the U.S. Government.

19 H. Kaiser Aluminum believes that there were sales to GAF Corporation in Wayne,
20 New Jersey, Nicolet Industries in Ambler, Pennsylvania, Monsey Products Company in Kimberton,
21 Pennsylvania, Gold Bond Building Products Division of National Gypsum in Buffalo, New York
22 and Gulf States Asphalt Company in Houston, Texas.

23 I. Kaiser Aluminum is not aware of any sales in the Geographic Area. Three of the
24 companies to whom chrysotile asbestos fibers were sold engaged in the manufacture or sale of
25 asbestos or asbestos-containing products. These were GAF Corporation, Nicolet Industries and
26 National Gypsum. Counsel for Kaiser Aluminum have located sales orders, invoices and purchase
27 orders relating to the sale of chrysotile asbestos fibers (grade 7D, 7DS, 7M and 7MS) to GAF

1 Corporation and the sale of chrysotile fibers (grade 7M) to Nicolet Industries.

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4 Dated: June 1, 1998

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THELEN, MARRIN, JOHNSON & BRIDGES LLP

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8 By Jennifer A. Kuenster
9 Jennifer A. Kuenster
10 Attorneys for Defendant
11 Kaiser Aluminum & Chemical Corporation

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3 VERIFICATION

4 COUNTY OF SAN FRANCISCO)
5) SS
6 STATE OF CALIFORNIA)

7 I, Joseph A. Bonn, am Vice President of Kaiser Aluminum &
8 Chemical Corporation, and am duly authorized to execute this
9 Verification, under oath and on behalf of Kaiser Aluminum &
10 Chemical Corporation. I have read the foregoing Kaiser Aluminum
11 & Chemical Corporation's Second Supplemental Responses to
12 Plaintiffs' Standard Interrogatories to All Defendants Pursuant
13 To General Order 129; Interrogatory nos. 10, 13, 19, 22 and 29 in
14 In Re: Complex Asbestos Litigation, SFSC 828684, and am informed
15 and believe, and on that basis state, that the matters contained
16 therein are true.

17 The information set forth in these answers was collected by
18 corporate personnel and other persons with knowledge of the
19 facts; such information is not necessarily within my personal
20 knowledge. However, on behalf of the corporation, I solemnly
21 affirm, under the penalties of perjury, that the foregoing
22 answers are true and accurate to the best of my knowledge,
23 information, and belief.

24 I declare under penalty of perjury that the foregoing is
25 true and correct.

26 Executed JUNE 16, 1998, at Pleasanton, California.

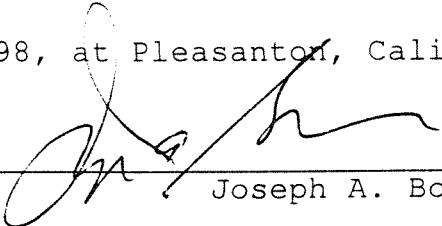
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28 _____
Joseph A. Bonn

EXHIBIT A

INTER - OFFICE MEMORANDUM

To: L. J. McAdams - Chalmette

Date: August 11, 1970

cc: J. W. Armstrong - 549KC
 J. A. Fitzgerald - Chalmette
 J. P. Hughes, M.D. - 2177KC
 L. F. Hunt - 767KC
 F. H. Lawson - 567KC
 R. Radakovich - Chalmette
 A. J. Trommershausen - 630KC
 W. W. Wolfe, M.D. - Chalmette
 Sheldon Hanemann - Louisiana Health Dept.

From: *from*
 T. J. Walker
 631KC

Subject: Asbestos in DC Casting

I have reviewed with Mr. Sheldon Hanemann, Louisiana Department of Health Industrial Hygienist, the health implications arising from your use of asbestos and mica wash in distributor troughs in DC casting. We have concluded that since the exposure time is short the health hazard from exposure to asbestos in this area is minimal as presently used.

General Information

It is my understanding that, over the past two years, 1000 pounds of asbestos short per month is used for casting operation in DC to form linings in distributors and to prevent leaks around downspouts. Lime was formerly used, but its use was discontinued because lime absorbs moisture and presents a potential explosion hazard when in contact with molten metal. John Fitzgerald is presently investigating alternate methods. Also, it is my understanding that DC personnel seldom are exposed to asbestos and mica dust in excess of 30 minutes per shift.

Sampling Methods and Results

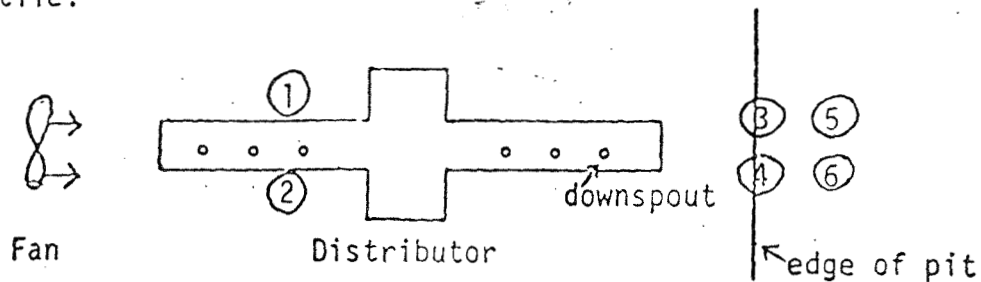
The standard midget impinger containing 50% ethyl alcohol as collecting medium was used to collect samples. The associated counting method uses a microscope with a 10X objective to examine particles which have settled in a cell having a depth of 1 mm. This microscope is capable of detecting fibers and dust greater than 1 μ in size.

Sample No.	Sampling Time min.	Total Fibers >5 μ	Total Particles >5 μ	Total Particles	mppcf
1	10.5	70,000	130,000	6,400,000	6.1
2	10.5	--	40,000	900,000	1.0
3	11.5	--	40,000	950,000	0.8
4	11.5	--	40,000	470,000	0.5
5	7.0	--	50,000	600,000	0.9
6	7.0	--	30,000	500,000	0.8

mppcf = million particles per cubic foot

August 11, 1970

From microscopic examination it was determined that the fibrous material was chrysotile.



The above sketch indicates sampling positions at the distributor. Samples 1 and 2 were taken as close to the breathing zone of the two workers as was possible. The remaining four samples were taken at the edge of the pit, downwind from the fan.

Criteria

Asbestos is a generic term applying to a number of mineral silicates which are incombustible in air and can be separated into filaments. The most widely used in industry is chrysotile, a magnesium silicate from serpentine.

It is well established through industrial experience that exposure to asbestos is associated with development of a disabling pneumoconiosis in man. The present threshold value for asbestos dust in the United States is 2.0 millions of particles per cubic foot of air (mppcf) for a daily eight-hour exposure, 40 hours per week. This value was established in 1969 (the previous recommended value was 5.0 mppcf) by the American Conference of Governmental Industrial Hygienists. Threshold Limit Values (TLV) refer to airborne concentrations of asbestos dust which represent conditions under which it is believed that nearly all workers may be repeatedly exposed without adverse effect. They are used as guides in the control of health hazards, and should not be regarded as fine lines between safe and dangerous concentrations. These limits are based on the best available information from industrial experience, and from human and animal studies.

Long fibers, more than 5 microns in length, are suspected of being more injurious to lung tissue than shorter fibers.

The TLV for mica is 20 mppcf.

Discussion

In Sample 1, the concentration of total particulate containing asbestos short was 6.1 mppcf, approximately 3 times the TLV of 2.0 mppcf. The concentration in each of the other samples was lower than the TLV. Since the exposure of personnel to these concentrations is relatively short (usually less than 30 minutes), there is minimal risk from the asbestos bodies.

August 11, 1970

However, the risk can easily be lessened by inexpensive engineering controls. Possible controls include:

1. Turning off man fans during handling or working with asbestos.
2. Vacuuming the asbestos rather than sweeping.
3. Collection of asbestos dust at source by using high velocity, low volume collection system on chisels and other tools.
(I sent John Fitzgerald some information on this collection system.)

Acknowledgment

The help of Bill Crates is greatly appreciated. His assistance expedited this study.

TJW:gb

SAMPLE #	BAUSE #	MINS.	N	FIBER X	PER Q. Q.		TOTAL PARTICULATE		AISI
					EX	EX 2	X	EX	
6-26-72	684	107		3	A. F. KIONER				
6-26-72	684	26		1.5					
6-26-72	684	23		9.8					
6-26-72	684	70		1.6					
6-26-72	684	111		1.8					
6-26-72	3269	46		1.3	J. WALLACE				
6-26-72	3269	29		1.9					
6-26-72	3269	84		1.4					
6-26-72	3269	66		1.5					
6-26-72	3269	181		1.5					
6-26-72	3269	466		1.2					
6-26-72	7746	33		1.3	G. MARTIN				
6-26-72	7746	80		1.3					
6-26-72	7746	103		2.3					
6-26-72	7746	177		1.1					
6-26-72	2763	453		1.3	A. MENA-ESSER				
6-26-72	2763	36		1.6					
6-26-72	2763	59		2.0					
6-26-72	2763	87		1.4					
6-26-72	2763	40		1.0					
6-26-72	11237	267		1.2	L. COULTER				
6-26-72	11237	111		0.9					
6-26-72	11237	20		2.2					
6-26-72	11237	146		1.0					
6-26-72	11237	1799	5	1.30		8.81	44.4	910.54	1.80
6-26-72	11237	146		1.0					
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PROOF OF SERVICE BY MAIL

In Re Complex Asbestos Litigation Action No. 956109

I, Lisa Wade Breen, declare as follows:

I am over the age of 18 years and not a party to the within action. My business address is Two Embarcadero Center, San Francisco, California 94111, in the County of San Francisco.

On June 18, 1998 I served a true copy of the attached

**KAISER ALUMINUM & CHEMICAL CORPORATION'S SECOND
SUPPLEMENTAL RESPONSES TO PLAINTIFFS' STANDARD
INTERROGATORIES TO ALL DEFENDANTS PURSUANT TO GENERAL
ORDER 129; INTERROGATORY NOS. 10, 13, 19, 22 and 29**

by placing for collection and deposit in the United States mail a copy of these papers at Thelen, Marrin, Johnson & Bridges, Two Embarcadero Center, San Francisco 94111 in a sealed envelope addressed to:

Anne Braudis, Esq.
BRAYTON HARLEY CURTIS
222 Rush Landing Road
P.O. Box 2109
Novato, CA 94948

I am familiar with the practice of Thelen, Marrin, Johnson & Bridges for the collection and the processing of correspondence for mailing with the United States Postal Service. In accordance with the ordinary course of business, the above-mentioned documents will be deposited with the United States Postal Service on the same day on which I placed the document in the internal mail system of Thelen, Marrin, Johnson & Bridges for deposit.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed on June 18, 1998 at San Francisco, California.

Lisa Wade Breen

