

FILE NAME: Kaiser Gypsum (KG)

DATE: 1978

DOC#: KG038

DOCUMENT DESCRIPTION: Legal - Answers to Interrogatories

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6 Attorneys for Defendant
7 KAISER CEMENT & GYPSUM CORPORATION
8
9

10 SUPERIOR COURT OF THE STATE OF CALIFORNIA
11 COUNTY OF SAN FRANCISCO
12

13 DEMETRIO D. DURAN,

NO: 719-238

14 Plaintiff,

ANSWERS TO INTERROGATORIE.

15 vs.

16 JOHNS-MANVILLE SALES
17 CORPORATION, et al.,

18 Defendants.
19

20 PROPOUNDING PARTY: Plaintiff, DEMETRIO D. DURAN

21 RESPONDING PARTY: Defendant, KAISER CEMENT & GYPSUM CORPORATION

22 SET NUMBER: One

23 DATED: January 31, 1978
24

25 KINCAID, GIANUNZIO, CAUDLE & HUBERT
26 A Professional Corporation
27

28 By *Victor J. Gianunzio*
VICTOR J. GIANUNZIO

1. State the name, present business address, business telephone, present residence address and capacity or title of the individual signing these interrogatories on behalf of the answering defendant.

ANSWER: Ian Watson, Vice President, Engineering and Research, Kaiser Cement & Gypsum Corporation, 300 Lakeside Drive, Oakland, California.

2. When did you first begin to manufacture and sell asbestos? Identify and describe all documentary or tangible evidence on which you base your answer.

ANSWER: Kaiser Cement & Gypsum is a California corporation. Kaiser Gypsum Company, Inc., a Washington Corporation, is a wholly owned subsidiary of Kaiser Cement & Gypsum.

Kaiser Cement & Gypsum Corporation and its subsidiary, Kaiser Gypsum Company, have never manufactured or sold asbestos. Kaiser Cement & Gypsum and Kaiser Gypsum Company has in the period between 1963 and 1976 sold several products that contained less than five (5) percent asbestos.

Kaiser Gypsum Company sold most of the products containing asbestos. These products include Pre-Mix Joint Compounds, Finishing Compounds, K-Spray Ceiling Texture, Cover-Tex Wall Texture and various fire rated gypsum wallboards containing fiberglass. The only product sold by Kaiser Cement & Gypsum containing asbestos was plastic gun cement.

Because we were named in the complaint as Kaiser Cement & Gypsum, we have answered these interrogatories in the name of Kaiser Cement & Gypsum despite the fact that many of the products containing asbestos were sold by Kaiser Gypsum Company.

1 The documentary evidence on which we base our
2 answer are the attached products formulas for each of the product
3

4 3. What percentage of asbestos or fiberglass by weight
5 do the products mentioned in Interrogatory No. 2 contain? In
6 answering this interrogatory, fully describe and identify all
7 documentary or tangible evidence on which you base your answer.

8 ANSWER: The percentage of asbestos by weight used in
9 the products mentioned in the answer to Interrogatory No. 2 varies
10 between less than 1% to slightly less than 5%. Kaiser Cement &
11 Gypsum Corporation purchased fiberglass and used approximately
12 0.3% fiberglass in fire-rated gypsum wallboards. Kaiser Cement &
13 Gypsum Corporation also purchased for resale Fiberglass Building
14 Insulation from Owens-Corning Fiberglass Corporation from 1962 to
15 1972.

16 The documentary evidence upon which this answer is base
17 is the same product formulas attached to the answer to interroga-
18 tory No. 2 as well as the attached product formulas to this answer
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LAW OFFICES
INCAIO, GIANUNZIO
CAUDLE & HURLBT
PROFESSIONAL CORP
JACK LONDON SQUARE
100 WEBSTER STREET
OAKLAND CA 94607

IAN WATSON

SMALL ACCESSORY PRODUCTS		FINISHING COMPOUND (POLYMERIC BASE)		BULLETIN NO: J 303	
APPROVALS:		PRODUCING PLANT SEATTLE		DATE: 2/28/73	
CANCELS:		DATE: 5/20/70		PAGE: 1 of 2	
BULLETIN	DESCRIPTION	\$	POUNDS	GALLONS	
220	Whiting	68.63	1400		
251	Mica, WMC P80K	9.80	200		
260	Sericite, Narvon	14.70	300		
045	Asbestos 7RF 10	3.68	75		
166	Hamaco 277 Gum	1.23	25		
330	Polyvinyl Alcohol	1.23	25		
245	Thickener	.24	5		
453	Preservative	.10	2		
454	Nopco PD 1	.15	3		
164	Glyoxal 80%	.24	5		
	TOTAL	100.00	2040		

MANUFACTURING INSTRUCTIONS:

1. See Process Bulletin No. J 303.
2. Mixing time shall be 8 minutes minimum and 12 minutes maximum.

QUALITY CONTROL:

TM-1	Viscosity, 150 gm cylinder @ 5 sec 200 gm to 150 cc water	38 - 40 mm
TM-3A	Pond...	6 - 7
TM-6	Application	Equal to Standard
TM-7	Workability	Equal to Standard
TM-35	0.25% Boric Acid Test	No firm gel after 1 min.

INITIAL REQUISITE PRODUCTS		COMPOUND		DATE: 3/26/74 PAGE: 1 of 3	
APPROVALS: <i>[Signature]</i>		PRODUCING PLANT Antioch		CANCELS: P-60 DATE: 9/1/68	
BULLETIN	DESCRIPTION	lb	POUNDS	GAL	
076	Calcined Gypsum	25.74	500		
291	Mica, P80F	7.72	150		
330	Polyvinyl Alcohol	.76	15		
045	Asbestos 7RF 10	3.35	65		
325	Polyvinyl Acetate, D702	4.12	80		
245	Thickener	.76	7		
430	Sodium Tripolyphosphate (STPP)	.05	1.0		
452	Preservative	.98	2.5		
320	Dibutyl Phthalate (Dry liquid concentrate)	.38	7.5		
332	Potassium Sulfate, K_2SO_4 (98% - 100 mesh)	.76	10 - 15		
417	Sodium Citrate (98% - 100 mesh)	.05	1.0		
220	Whiting	25.74	500		
146	Ono Cal 50	5.15	100		
076	Calcined Gypsum	25.74	500		
TOTAL BATCH WEIGHT		100.00	1943 lbs.		

MANUFACTURING INSTRUCTIONS:

1. A thorough clean-out with whiting must be made before and after each production run.
2. Wall Texture or Joint Compounds are to be run immediately after a run of this product.
3. Mixing time shall be 8 minutes minimum and 12 minutes maximum.
4. Special orders of SLOW SET One Day Joint Compound can be made by reducing the amount of potassium sulfate (Bulletin No. 332) from 10 - 15 pounds to 2.5 to 5.0 pounds per batch.

DRYFALL ACCESSORY PRODUCTS		COMPOUND (POLYMERIC BASE)	REVISION NO: DATE: 2/28/73 PAGE: 1 of 2	
APPROVALS: <i>[Signature]</i>		PRODUCING PLANT DELANCO	CANCELS: J 6412 DATE: 12/22/77	
BULLETIN	DESCRIPTION	%	POUNDS	CAL
220	Whiting	60.95	1250	
251	AMC Mica	12.20	250	
260	Sericite (Warren)	12.20	250	
045	Asbestos 7HF 10	4.83	100	
186	Hydrite Flat D Clay	4.83	100	
166	Hamaco 277	2.44	50	
330	Polyvinyl Alcohol	1.47	30	
277	Thickener	.48	10	
453	Preservative	.07	1.5	
164	Glyoxal	.24	5.0	
454	Nopco-PD1	.15	3.0	
	TOTAL	100.00	2049.5	

MANUFACTURING INSTRUCTIONS:

1. See Process Bulletin J 308.
2. Mixing time shall be 3 minutes minimum and 12 minutes maximum.

QUALITY CONTROL:

TM-1	Viscosity, Brookfield 200 gm to 140 cc water	160,000 - 190,000 cp
TM-3	Bond	9 - 10
TM-6	Application	Equal to Standard
TM-7	Workability	Equal to Standard
TM-35	0.25% Boric Acid Test	No firm gel after 1 min

INDUSTRIAL ACCELERANT
PRODUCTS

FRANK E. JOINT
CONCRETE
DUAL PURPOSE

BULLETIN NO: J 6605
DATE: 2/1/72
PAGE: 1 of 2

APPROVALS:

PROJECTING PLANT
JACKSONVILLE

CANCELS: J 6605
DATE: 9/29/71

BULLETIN	DESCRIPTION	G	POUNDS	TIME
220	Whiting	39.72	2550	
256	Mica 1203	7.79	500	
261	Mica, Marvon GEF 2	6.23	400	
050	Asbestos 7 TF 1	3.89	250	
456	Troxan CMP 100EP	.09	6	
245	Methocel 228	.31	24	
200	Keltane	.16	10	
	Water (starting)	25.99	1658	200
470	IWA Emulsion	6.92	444	48
078	Carbitol Solvent	.47	30	1
	Water (adjust to standard viscosity)	8.43	541.5	60
	TOTAL	100.00	6411.5	

MANUFACTURING INSTRUCTIONS:

1. See Process Bulletin J 205.
2. For DMS, add 4 lbs yellow oxide code.

QUALITY CONTROL:

TM-1A Viscosity, Brookfield

340,000 to 370,000 cP

TM-3 Tape Bond

9 - 10

TW-31 Standard Test Viscosity,
Brookfield

190,000 - 210,000

PRODUCT BULLETIN
CENTRAL ACCESSORY
PRODUCTS

PREMIX MIXING
COMPOUND

BULLETIN NO: J-6609
DATE: 11-20-74
GE: 1 of 2

APPROVALS:

BRK

PRODUCING PLANT:
JACKSONVILLE

CANCELS: J-6609
DATE: 9-16-73

BULLETIN RM-J	DESCRIPTION	%	POUNDS	GALLON
221	Whiting	61.60	4000	
047	Asbestos CG 210	.92	50	
442	Talc, Nxtal 200	1.54	100	
086	Celite 434	1.54	100	
245	Thickener W/C 22E	.25	16	
200	Kalitor	.08	5	
330	EW Alcohol	.16	10	
453	EVA 10 SEP	.26	4	
470	EVA Emulsion 4.40% on solids	5.11	322	16
	Water	26.05	1750	210.75
284	Oleic Acid	.37	24	
450	Triethanolamine	.12	12	
267	Odorless Mineral Spirits	1.23	80	12.5
191	Red Oxide Color		0.25	4.00
	TOTAL	100.00	6493.20	

MANUFACTURING INSTRUCTIONS:

1. See Process Bulletin J-2.
2. Add Red Oxide color to the water and mix for one minute before addition of other items (RM J-191). Two ounces Red Oxide color per batch.
3. Filling: 4 gal. 45# gross; 5 gal. pails: 60# gross.

QUALITY CONTROL:

TM-1	Viscosity, 150 gm cylinder @ 5 sec.	14 to 16 gm
TM-6	Application	Equal to Standard
TM-7	Workability	Equal to Standard

PERFECT TOLLETTIN
INITIAL ACCESSORY
PRODUCTS

COVER-TEX
WALL TEXTURE

BULLETIN NO: J-5305
DATE: 11-20-74
PAGE: 1 of 2

APPROVALS:

PRODUCING PLANT:
JACKSONVILLE

CANCELS: J-5305
DATE: 12-5-69

BULLETIN
RM-J

DESCRIPTION

5

POUNDS

CALC

220

Whiting

66.43

1350

442

Talc (Nytal 220)

19.68

400

045

Asbestos 7RF10

4.92

100

446

Titanium Pigment

2.46

50

056

Clay Wyovel

1.23

25

436

Starch

2.46

50

084

Casain

1.23

25

102

Diammonium Phosphate

0.10

2

022

Ammonium Bihorate

0.10

2

456

EMA-10-SEP

0.15

3

454

Monco PD-1

0.15

3

200

Keltose

0.30

6

245

Methocel 228

0.30

6

164

Glyoxal 80%

0.42

10

TOTAL

100.00

2032

MANUFACTURING INSTRUCTIONS:

Mixing time shall be 6 minutes minimum and 12 minutes maximum.

QUALITY CONTROL:

TM-1

Viscosity, Brookfield spindle "A" @ 5 RPM,
200 gm/200 cc water

30,000-35,000 CP

TM-3A

Bond

Equal to Standard

TM-34

Hardness

Equal to Standard

PRODUCTS		CERTIFIED TEXTURE		DATE: 3/26/74	
APPROVALS: <i>Pd's</i> <i>Antioch</i>		PRODUCING PLANT ANTIOCH		PAGE: 1 of 2	
CANCELS: J-5506		DATE: 5/16/73			
BULLETIN	DESCRIPTION	%	POUNDS	GAL	
442	Talc, Wental 202	31.18	300		
221	Limestone	31.18	300		
445	Titanium Pigment	2.60	25		
056	Wyofel Bentonite	2.60	25		
035	Asbestos 3Z	1.30	12.5		
065	Bone Glue	.52	5		
084	Casein	1.04	10		
025	Amm. Oxalate	.21	2.0		
026	Amm. Pentaborate	.26	2.5		
506	Zinc Oxide	.05	0.5		
166	Hydrated Lime	.05	0.5		
245	Methocel 228	.31	3.0		
074	Burnt Umber	---	(1 oz.)		
282	Percol Kasma	---	(1 oz.)		
322	Styrene Aggregate	2.60	25	(50)	
167	Hydrite MP Clay	15.60	150		
441	Snocal 50 Clay	10.40	100		
453	Preservative	.10	1.0		
TOTAL		100.00	962		

MANUFACTURING INSTRUCTIONS:

- See Process Bulletin No. J-4, except as noted below:
 - Use a Broughton, paddle type mixer, with no Entoleter after blending.
 - Charge all items except Styrene aggregate into the mixer. Mix for eight (8) minutes after the Sweco screen has cleared.
 - With mixer running, add the styrene aggregate. Continue mixing for a minimum of three (3) minutes after completing addition of aggregate.
- Package 32 pounds minimum per bag.

QUALITY CONTROL:

TM-1B - Viscosity, cc per 100 gm to give 5 - 5-1/2" diameter
 TM-3A - Bond

110 to 190 cc
 Equal to Stand

PERMANENTE CEMENT COMPANY

PLANT: Permanente

Product Specification

No. Pl.G.

Standard Product: Plastic Gun Cement

Effective Date: 1 August, 1963

Special Product: _____

Supercodes No. Pl.G-2

FORMULATION(1)	Acceptance Limits(2)		Control Values		
	Minimum	Maximum	Minimum	Standard	Maximum
3.0% Lincoln Clay					
0.1% R.D.A.					
0.1% Airlon					
3.0 to 5.0% Asbestos Fiber					
3.75% Gypsum					
11.0% Approximate					
Remainder Type I, II, IIIA, V clinker					
SO ₃ , %	1.20	2.50	1.55	1.75	1.9
Loss on Ignition, %		3.0		1.80	2.10
PHYSICAL REQUIREMENTS					
Fineness, sq.cm./g.				(4500)(3)	
Soundness, exp., %		0.70			
Time of Setting, Gillmore					
Initial, hrs. & min.	1:15				
Final, hrs. & min.		9:00			
Air Content, % by vol.	23.0	31.0	25.0	28.0	30.0
Compressive Strength, psi.					
1 Day	550		600	800	1000
Percent plus 48 mesh	1.3	4.0	1.5	2.0	3.0

NOTES: (1) 0.25% CaCl₂ may be added in winter months.

(2) All limits set by PCC.

(3) Typical only (with asbestos).

Originated By:

Approved By:

Authorized By:

Process Eng. Dept.

8/8/63

Date:

Tech. Director

8/9/63

Date:

Vice President in Charge of Operations

Reason: L.O.I. increase due

to combined water in asbestos

Mr., Proc. Engr.

8/9/63

Date:

8/13/63

Form 665 (11/62)

PERMANENTE CEMENT COMPANY

PLANT: Permanente

Product Specification

No. Pl.

Standard Product: Plastic and Plasti-Spred Cement

Effective Date: 1 August, 1963

Special Product: _____

Supercodes No. Pl.-3

FORMULATION(1)	Acceptance Limits (2)		Control Values		
	Minimum	Maximum	Minimum	Standard	Max
3.0% Lincoln Clay					
0.1% R.D.A.					
0.1% Airlon					
3.0 to 5.0% Asbestos Fines					
1.75% Gypsum					
11.0% Approximate					
Remainder Type I, II, IIIA, V clinker					
SO ₃ , %	1.20	2.50	1.55	1.75	1.9
Loss on Ign., %		3.0		1.80	2.1
PHYSICAL REQUIREMENTS					
Fineness, sq.cm./g.				(4400)(3)	
Soundness; exp., %		0.70			
Time of Setting, Gillmore					
Initial, hrs. & min.	1:15				
Final, hrs. & min.		9:00			
Air Content, % by vol.	23.0	31.0	25.0	28.0	30.0
Compressive Strength, psi.					
1 Day	650		700	850	1000

NOTES: (1) 0.25% CaCl₂ may be added in winter months.

(2) All limits set by PCC.

(3) Typical only.

Originated By:

Approved By:

Authorized By:

Process Eng. Dept.

8/8/63

Date

Tech. Director

8/9/63

Date

Vice President in Charge of Operations

Reason: I.O.I. increase due

to combined water in asbestos. Mgr., Proc. Engr.

8/9/63

Date

Date: 8/22/63

Form 665 (11/62)

BOARD BULLETIN
INSULATION PRODUCTS
ST. HELENS, OREGON

MINERAL
FIBERBOARD
UL FIRE RATED

BULLETIN NO: B-10
DATE: 6/17
PAGE: 1 of 1
CANCELS: B-10
DATE: 6/22

APPROVALS

1/10/74

	File and Lay-In	
	1/2"	5/8"
Mineral Wool, %	59.7	59.7
Sterling Clay, %	11.5	11.5
Asbestos, %	1.6	1.6
Sawdust Fiber, %	1.1	1.1
Starch (BD), %	8.5	8.5
Paracol 1276 (Solid), %	1.0	1.0
Repulped Broke & Planer Dust, %	16.6	16.6
Gendriv 162, %	0.15	0.15
Standard Machine Speed, FPM	21	19
Density, Planed, Lbs/Cu. Ft., (BD)	22-23	22-23
Transverse Cross, Headrig, Lbs., Minimum	25	31
Hardness, Planed, Lbs., Minimum	33	33
Shrinkage at 1400 F., %, Maximum	3	3
Incombustibles, %, Minimum	85	85
Water Absorption, % By Volume, Maximum	5	5
Sag at 1700°F., %, Maximum	0.100	0.100
Headrig Thickness, Inches	.630-.660	.740-.77
Planed Thickness, Inches	.525-.530	.650-.66
Calender Thickness, Inches		
Individual	.490-.500	.615-.62
Tape Measure, 10 pieces	4-7/8 - 5	6-3/16 - 6-1/4
Weight, Headrig, Lbs/MSF	1210	1420
Weight, Finished, Lbs/MSF	990	1225

PRODUCT BULLETIN
GYPSUM PRODUCTS

GYPSUM WALLBOARD
1/2" NULL-A-FIRE (UL)
TYPE X

BULLETIN NO: B-4
DATE: 10/8/64
PAGE: 1 of 2
CANCELS: B-4
DATE: 3/9/64

PRODUCING PLANTS:

Long Beach, Antioch, Seattle, Rosario, and Jacksonville

Core Formula:
(Lbs./M sq. ft.)

ALL PLANTS (Except as noted)

Board Stucco	(S-1 and S-2)	1500 - 1700
Glass Fiber	(B-G-1)	4.7 - 5.1
Paper Fiber	(B-G-1)	0 - 10.0
Starch	(RM-B-11)	7 - 10
Perlite - Null-A-Fire (c.f./M)	(B-G-1)	0 - 5.5
Soap	(B-G-1)	0.2 - 1.5 (Long Beach, Antioch & Jacksonville 0.2 - 0.7)
Lignin	(B-G-1)	0 - 3.0
Ground Gypsum	(B-G-1)	60 maximum
Potassium Sulfate (Rosario - 2.0 maximum)	(B-G-1)	5.0 "
Rehydrated Gypsum	(B-G-1)	0 - 30
Hydrated Lime	(RM-P-3)	0 - 0.75
Retarder (Rosario only)	(B-G-1)	0 - 0.5

Note: Formula shall conform to U.L. Code No. 3543

Paper Liners - Manila and Greyback paper

OPERATING SPECIFICATIONS: (Refer to Process Bulletin B-G-2 for General Specifications.)

1. Slurry Setting Time, minutes	2 - 4
2. Wet Slurry Weight (lbs./c.f.)	77 - 85
3. Wet Compressive Strength, psi	350 - 500

PRODUCT BULLETIN
GYPSUM PRODUCTS

GYPSUM WALLBOARD
1/2" NULL-A-FIRE (UL)

BULLETIN NO: 8-4
DATE: 1/22/52
PAGE: 2 of 2
CANCELS: 8-4
DATE: 10/20/50

PRODUCT SPECIFICATIONS: (Refer to Product Bulletin 8-G-4 for General Specifications)

Wet Weight (lbs./M sq. ft.)	3000 - 3300
Dry Weight (lbs./M sq. ft.)	2120 - 2250 - Average 2175
Evaporation Loss (lbs./M sq. ft.)	900 - 1100
Thickness - Average (inch)	.480 - .505
" " - Individual Reading (inch)	± .010 from average
Edge Hardness or Take-off (lb.)	8.0 minimum
End Peel after Sawing (inch)	1/8 maximum
Flexural Strength, minimum	
Across grain (lb.)	150
Parallel " "	45
Deflection or Break, minimum	
Across grain (inch)	0.25
Parallel " "	0.15
Punch Test (lb.)	1100 - 1800
Twist Test, maximum split	
Face (inch)	3/4
Back " "	3/4
Hammer Loss Test, decigrams	
Individual Test, maximum	5
Bond at High Humidity, maximum peel	
Face (inch)	1/2
Back " "	1/2

Face printing shall read - 1/2" NULL-A-FIRE TYPE X X 1/2" NULL-A-FIRE TYPE X

*Denotes addition and change.

PRODUCT BULLETIN
GYPSUM PRODUCTS

GYPSUM WALLBOARD
5/8" NULL-A-FIRE (UL)
* TYPE X

BULLETIN NO: 8-6
DATE: 4/29/
PAGE: 1 of 3
CANCELS: 8-6
DATE: 8/8/6

PRODUCING PLANTS:

LONG BEACH, ANTIOCH, SEATTLE, ROSARIO

Core Formula:
(Lbs./M sq. ft.)

ALL PLANTS (Except as noted) ANTIOCH

Board Stucco	(S-1 and S-2) (Rosario - 1960 - 2175)	1900 - 2150	1850 - 2150
Glass Fiber	(B-G-1)	6.0 - 6.5	6.0 - 6.5
Paper Fiber	(B-G-1)	0 - 12.0	None
Starch	(RM-B-11)	9.0 - 12.5	9.0 - 15.0
Perlite Null-A-Fire (c.f./M)	(B-G-1)	6.0 - 7.0	6.0 - 7.0
*Soap	(B-G-1) (Rosario - 0.6 - 2.0)	0.3 - 1.5	2.0 - 3.5
Lignin	(B-G-1)	0 - 4.0	0 - 4.0
Ground Gypsum	(B-G-1) (Rosario - None)	60.0 maximum	130.0 maximum
Rehydrated Gypsum	(B-G-1)	0 - 24	None
Potassium Sulfate	(B-G-1)	2.0 maximum	2.0 maximum
Retarder (Rosario only)	(B-G-1)	0.75 "	--
Hydrated Lime	(RM-P-3)	0 - 1.13	0 - 1.13

*Note 1. Formula shall conform to U.L. Code No. 3543.

*Note 2. At Antioch, Hercules soap is preferred. Ultrawet usage range - 0.2 - 0.6.

Paper Liners

1. Manila and greyback paper.
2. For 5/8" x 24" face board for Moveable Partitions, use following width paper:

Manila - 27 inches
Greyback - 23-1/4 inches

*Denotes additions and changes.

1 4. Did you ever supply any products containing as-
2 bestos or fiberglass to the United States Government Naval Ship-
3 yards through the Naval Supply System or any other purchasing
4 system for the United States Government?

5 ANSWER: Kaiser Cement & Gypsum has not, to our know-
6 ledge, supplied products containing asbestos or fiberglass to the
7 U.S. Government Naval Shipyards.

8 5. If the answer to Interrogatory No. 4 is affirmative,
9 give the exact amounts, types of products, dates of sales, and
10 person or persons in your company responsible for each sale. In
11 answering this Interrogatory, itemize and fully describe all of
12 the facts, acts, events and/or documentary or tangible evidence
13 on which you base your answer.

14 ANSWER: Not applicable.

15 6. What brand names have you supplied throughout the
16 period from when you first began selling asbestos or fiberglass
17 products to the present?

18 ANSWER: Kaiser Cement & Gypsum products, which used to
19 contain small amounts of asbestos, were sold under our company
20 name.

21 7. Please list the names, titles, current address,
22 and current position of each sales manager responsible for as-
23 bestos and fiberglass product sales to the United States Naval
24 Shipyards for the periods between 1935 and 1971.

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26
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LAW OFFICES
KINCAID, GIANUNZIO
CAUDLE & HUBERT
A PROFESSIONAL CORP.
JACK LONDON SQUARE
100 WEBSTER STREET
OAKLAND, CA 94607

(415) 465-5212

IAN WATSON

1
2 ANSWER: Kaiser Cement & Gypsum did not, to our know
3 sell products containing asbestos or fiberglass to the United
4 States Naval Shipyards between the years 1935 to 1971 or at any
5 other time.

6 8. Please list the names, titles, current address,
7 and current position of each sales person responsible for asbest
8 or fiberglass products sales to Hunters Point Naval Shipyard and
9 Mare Island Naval Shipyard for the periods between 1935 and 1971
10 if different than the periods names in your answer to Interrogatc
11 No. 7.

12 ANSWER: See answer to Interrogatory No. 7.

13 9. Please list the names, address and titles of all
14 persons who have control of sales record, sales summaries, graphs
15 of sales, purchase orders, or invoices for asbestos or fiberglass
16 product sales for the period from 1935 to 1971.

17 ANSWER: Kaiser Cement & Gypsum objects to this inter-
18 rogatory as burdensome and oppressive. Kaiser Cement & Gypsum
19 does not sell asbestos or fiberglass. We did sell products con-
20 taining small amounts of asbestos and fiberglass as stated in our
21 answer to Interrogatory No. 3. As further stated in our answers
22 to Interrogatory Nos. 4, 7, 8 and 10, to the best of our knowledge
23 Kaiser Cement & Gypsum has never supplied asbestos or fiberglass
24 to the U.S. Naval Shipyards. Kaiser Cement & Gypsum is not
25 trying to be unreasonable in answering this interrogatory. If
26 there are any further questions regarding the answer to this
27 interrogatory, please contact the Law Offices of Kincaid, Gianunzio,
28 Caudle & Hubert.

OFFICES
GIANUNZIO
& HUBERT
SIONAL CORP.
DON SQUARE
STER STREET
O. CA 94007
405.3212

IAN WATSON

1 10. Did you ever supply asbestos or fiberglass product
2 through distributors or wholesalers who sold those products to the
3 Hunters Point Naval Shipyard or the Mare Island Naval Shipyard
4 between the years of 1935 and 1971?

5 ANSWER: Kaiser Cement & Gypsum has not, to our know-
6 ledge, supplied products containing asbestos or fiberglass through
7 distributors or wholesalers for sale to the Hunters Point Naval
8 Shipyard or the Mare Island Naval Shipyard between 1935 and 1971
9 or at any other time.

10 11. If the answer to Interrogatory No. 10 is affirma-
11 tive, please supply the names of those distributor or wholesalers
12 the products supplied through them, dates of supply, and the name
13 addresses and titles of those persons presently employed at said
14 distributors or wholesalers who have specific information on such
15 purchases and sales.

16 ANSWER: Not applicable.

17 12. If, in your answers to the foregoing Interrogatori
18 you state that records are unavailable or have been destroyed,
19 please give the names, address and positions within your company
20 of all persons who have personal knowledge of the information con-
21 tained in such unavailable or destroyed records.

22 ANSWER: Not applicable.

23 13. Please provide the names, address, titles of all
24 management, product safety, and medical persons within your
25 company who became aware of each of the articles or reports, the
26 date they became aware of each and every article or report, and
27 what was done by each person in response to becoming aware of
28 each and every article or report as set forth on the attached

LAW OFFICES
KINCAID, GIANUNZIO
CAUDLE & HUBERT
A PROFESSIONAL CORP.
JACK LONDON SQUARE
100 WEBSTER STREET
OAKLAND, CA 94607

(415) 465-5212

IAN WATSON

1 Appendix to Interrogatory No. 13.

2 ANSWER: Kaiser Cement & Gypsum personnel have not seen
3 or been aware of any of the reports or articles listed in Appendix
4 to Interrogatory No. 13.

5 14. If you will do so without a motion to produce,
6 please provide copies of any handwritten or typed memoranda, notes
7 or letters issued to or by the persons regarding each and every
8 report or article listed in Interrogatory No. 13.

9 ANSWER: There are no notes, letters or memoranda re-
10 garding the articles listed in Interrogatory No. 13 because
11 Kaiser Cement & Gypsum personnel were not aware of the reports
12 listed in Interrogatory No. 13.

13 15. Please list all medical information upon which you
14 relied in making conclusions as to the health hazard of exposure
15 to asbestos dust from the date you began supplying asbestos to
16 1971.

17 ANSWER: Kaiser Cement & Gypsum did not receive or have
18 medical information on the health hazard of exposure to asbestos
19 dust prior to 1971.

20 16. If you will do so without a motion to produce,
21 please provide copies of all medical information referred to in
22 your answer to Interrogatory No. 15.

23 ANSWER: Not applicable.

24 17. What are the names and addresses of all doctors
25 or medical advisors who provided you with information on the
26 health hazards of exposure to asbestos dust during the years be-
27 tween the time you began supplying asbestos products until 1971.
28

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(415) 465-5212

IAN WATSON

1 ANSWER: Kaiser Cement & Gypsum did not receive from
2 doctors or medical advisors information on the health hazards of
3 exposure to asbestos dust prior to 1971.

4 18. If you will do so without a motion to produce,
5 please provide copies of all handwritten or typed memoranda, note
6 or letters provided any person in your company from any doctor or
7 medical advisor listed in your answer to Interrogatory No. 17.

8 ANSWER: Not applicable.

9 19. State the name and address of your liability
10 carrier or carriers for the period from 1935 to 1971.

11 ANSWER: Kaiser Cement & Gypsum has searched its record
12 and is unable to locate records concerning its liability carriers
13 for the period from 1935 to 1971. The only records available
14 concerning liability coverage cover the years 1964 to 1971. See
15 attached sheet for coverage information.

16 20. State the exact nature of any warning notices on
17 the packaging of your products which contain asbestos and the
18 dates when each such warning was placed on the packaging.

19 ANSWER: Kaiser Cement & Gypsum placed the following
20 warning notice on packages of joint compounds, textured paints,
21 and plastic cements containing small amounts of asbestos. This
22 warning notice was used from 1972 until asbestos was discontinued
23 in these products in 1976. See attached sheet for copy of the
24 warning notice

25 21. Did you every supply any warnings or precautionary
26 information to any consumer or purchaser of products you manu-
27 factured or sold, either verbally or in written form before 1966,
28 as to health hazards involved with the use of such products or

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(415) 485-9212

IAN WATSON

General Liability

Oct 1964 TO Present

Truck Insurance Exchange

350-40-00

100/300/300 BI
100/100 PL

EFF 1-30-71

500,000. CS

EFF 10-1-77

500,000 CSL
1,000,000 CSL

Umbrella

Jan 1, 1968 TO Jan 30-1971

Lloyds LUS 1066 A

Lloyds LUS 1067 A

Lloyds LUS 1068 A

1,000,000 XS R.

9,000,000 XS Abr

10,000,000 XA Abr

Jan 30-1971 - Jan 30-74

Cv Starr 411-4919

Cv Starr 411 4969

Lloyds (C.V. Starr) 12.0053

Cv. Starr 411 4970

5,000,000 XA Prima

15,000,000 XA Abr

7,000,000 } XS Abr
3,000,000 }

CAUTION

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

BREATHING ASBESTOS DUST

MAY CAUSE SERIOUS BODILY HARM

Above label is in compliance with Federal Regulations relating to Occupational, Safety, and Health Standards, 29 CFR 1910.93a.

1 safety information as to its use?

2 ANSWER: Kaiser Cement & Gypsum objects to this inter-
3 rogatory as irrelevant, because Kaiser Cement & Gypsum has never
4 manufactured asbestos and has never sold its products to the
5 U.S. Naval Shipyards. However, in an effort to avoid disputes,
6 Kaiser Cement & Gypsum answers as follows. Kaiser Cement &
7 Gypsum did not supply any special warnings or precautionary in-
8 formation prior to 1966 relating to the small amounts of asbestos
9 in joint compounds, texture paints, and fire-rated mineral fiber
10 boards. Prior to 1966, Kaiser Cement & Gypsum provided normal
11 instructions for using its products. These instructions included
12 standard precautions to be observed in using Portland cement.

13 22. Did you ever supply any warnings or precautionary
14 information to any consumer or purchaser of products you manu-
15 factured or sold, either verbally or in written form after 1966,
16 as to health hazards involved with the use of such products or
17 safety information as to its use?

18 ANSWER: Kaiser Cement & Gypsum did place the warning
19 notice, attached to the answer to Interrogatory No. 20, on pack-
20 ages of joint compounds, texture paints and plastic cements con-
21 taining small amounts of asbestos, starting in 1972. This warning
22 notice was used until asbestos was discontinued in these products
23 by 1976.

24 23. If your answers to Interrogatory No. 21 or No. 22
25 is affirmative, please provide a copy of such warnings or precau-
26 tionary information, dates such information was provided and names
27 or persons to whom such information was provided.

28 ANSWER: See attached copy of said warning in answers

1 to Interrogatories No. 20 and 22. This warning notice was used
2 from 1972 until asbestos was discontinued in these products by
3 1976. This warning notice on the packages was available to all
4 persons using these products.

5 24. Do you contend that prolonged exposure to asbestos
6 dust does not create a health hazard to the human being exposed
7 thereto?

8 ANSWER: Kaiser Cement & Gypsum is not sufficiently
9 aware of reports and studies of prolonged exposure to asbestos
10 dust to enable it to make any contention concerning whether such
11 prolonged exposure creates a health hazard to the person being
12 exposed thereto.

13 25. If your answer to Interrogatory No. 24 is affirma-
14 tive, itemize and fully describe all of the facts, acts, events
15 or conduct or documentary or tangible evidence presently known to
16 you on which you base such contention, and the exact duration of
17 exposure in years upon which such information is based.

18 ANSWER: Not applicable.

19 26. Do you contend that prolonged exposure to fiberglass
20 dust does not create a health hazard to the human being exposed
21 thereto?

22 ANSWER: Kaiser Cement & Gypsum is not sufficiently
23 aware of reports and studies on prolonged exposure to fiberglass
24 dust and thus is not able to make any contention concerning
25 whether such prolonged exposure creates a health hazard to the
26 person being exposed thereto.

27 27. If your answer to Interrogatory No. 26 is affirma-
28 tive, itemize and fully describe all of the facts, acts, events

1 or conduct or documentary or tangible evidence presently known
2 to you on which you base such contention, and the exact duration
3 of exposure in years upon which such information is based.

4 ANSWER: Not applicable.

5 28. List all tests or studies performed on asbestos
6 or fiberglass products of which you are aware, either by persons
7 employed by your company, independent contractors or private
8 persons, groups or foundations.

9 ANSWER: To our knowledge, tests have not been performed
10 on Kaiser Cement & Gypsum products containing small amounts of
11 asbestos to evaluate airborne asbestos during mixing and sanding.
12 Tests are currently being made by the State Health Department to
13 evaluate airborne asbestos in residences where ceiling texture
14 was applied several years ago. Other tests have been made on
15 Kaiser Cement & Gypsum products concerning the products flame-
16 resistant qualities and sound reduction qualities.

17 Except as otherwise answered above, Kaiser Cement &
18 Gypsum objects to this question as burdensome and oppressive.

19 29. Do you contend that management personnel were not
20 aware of the dangers of prolonged exposure of twenty (20) years
21 or more to asbestos dust during the following years:

22 (a) 1902 - 1918	Yes.
23 (b) 1919 - 1930	Yes.
24 (c) 1931 - 1936	Yes.
25 (d) 1936 - 1938	Yes.
26 (e) 1939 - 1942	Yes.
27 (f) 1942 - 1947	Yes.
28 (g) 1947 - 1955	Yes.
(h) 1955 - 1960	Yes.
(i) 1969 - 1966	Yes.

(j) 1966 - 1971

Yes.

(k) 1971 - 1977

No.

30. If your answers to Interrogatory No. 29 were the management personnel were aware of the dangers during any period listed in (a) through (k), please list the name of each person received such notice, their title, and what action was taken after such information was received.

ANSWER: Beginning in 1971, Kaiser Cement & Gypsum personnel generally became increasingly aware of dangers of prolonged exposure of twenty years or more to asbestos dust.

31. Please provide the name and address of your present Director of Safety and Occupational Health.

ANSWER: Mr. R. H. Berby, Manager, Environmental Control and Energy, Kaiser Cement & Gypsum Corporation, 300 Lakeside Drive, Oakland, California 94666.

32. Were any of your products containing asbestos and, or, fiberglass qualified to meet federal specification numbers LLI-1-535 (1960 and prior) or SS-A-00118-C (1960 and Later)?

ANSWER: Kaiser Cement & Gypsum produced fire-rated mineral fiberboards, containing small amounts of asbestos, meeting federal specification SS-A-00118C. Our fire-rated mineral fiberboards were qualified to meet Type IV C; noise reduction Grades 6, 7 and 8; sound absorption Grades 106, 107, 108 and 109; and flame resistance Class A of Federal Specification SS-A-00118C. We cannot find LLI-1-535 in the index to the federal specifications. None of the Kaiser Cement & Gypsum products containing small amounts of asbestos and, or, fiberglass were qualified to meet federal specification LLI-1-535.

1 33. Please list your sources of supply of asbestos
2 fibers which are mined and sold by other suppliers for the years
3 you began selling asbestos products until the year 1976.

4 ANSWER: Kaiser Cement & Gypsum objects to this inter-
5 rogatory and each and every other interrogatory using or referring
6 to the undefined term "asbestos products", as it does not believe
7 it ever sold what could be called "asbestos products". Kaiser
8 Cement & Gypsum did sell products that contained very small amount
9 of asbestos. Kaiser Cement & Gypsum does not wish to be uncooper-
10 tive and in an effort to avoid dispute, answer this interrogatory
11 as set forth below.

12 Kaiser Cement & Gypsum purchased asbestos from:

	<u>Approximate %</u>
14 Johns-Manville	50-55%
15 Philip Carey	35-40%
16 Union Carbide	5-10%
17 Western Chemical & Mfg. Company	2-5%

18 34. Did you do your own advertising to the public or
19 consumer about your asbestos products?

20 ANSWER: Kaiser Cement & Gypsum objects to this inter-
21 rogatory and each and every other interrogatory using or referring
22 to the undefined term "asbestos products", as it does not believe
23 it ever sold what could be called "asbestos products". Kaiser
24 Cement & Gypsum does conduct their own advertising.

25 35. If the answer to Interrogatory No. 34 above is in
26 the affirmative, please state:

27 A. Name and address of persons in charge of such ad-
28 vertising for the years from 1935-1970.

ANSWER: Mr. Lee Bryan, Manager of Public Relations, is
in charge of Kaiser Cement & Gypsum's advertising. Mr. Bryan has
held this position for approximately the past fifteen (15) years.

Cement Plastering

For all architectural exterior finish-
materials, only portland
cement plaster offers the flexibility
to render to perfection every
nuance and subtlety between the
intricate modeling required to
restore San Francisco's Palace of
the Arts, shown on the cover,
and to create the dramatic inter-
plays of light and shadow which
distinguish the contemporary
structures pictured on this page.
And, of all plastering materials,
only portland cement plasters offer
the durability and hardness
required to withstand the rigors of
exterior exposures . . . the
capability to survive repeated
cycles of wetting and drying, freeze
and thaw . . . the ability to ward
off hard knocks and abuse.

Here is a material which can be
textured to any depth, finished flat,
embedded with tiny mineral flakes
or coarse marble chips, integrally
colored or painted. Arched,
curved, rounded or angular,
smooth or rough planes pose no

problems when plastering with
today's improved plastic cement
plaster. This is truly a versatile
medium. Of equal importance, it
is economical to use, incombust-
ible, vermin-proof and a natural
insulator.

With Kaiser Permanente Plastic
and Plastic Gun Cements, con-
tractors can bypass the trouble-
some and often unreliable measur-
ing and mixing chores of the past.
Kaiser Permanente Plastic
Cements are pre-mixed to
controlled formulas that take the
guesswork out of on-the-job
cement plaster mixing. Only clean
sand and water need be added.
This assures uniformity of mix,
batch after batch, job after job.

Experienced contractors are
readily available. The techniques
they use are outlined on the follow-
ing pages so that you may find
this "Guide To Cement Plastering"
a useful tool when you specify
Kaiser Permanente Plastic or
Plastic Gun Cements.

A. Palace of Fine Arts, San Francisco.
General Contractor: M & K
Architect: William Gladstone Merchant &
Assoc. and Welton Becket & Assoc.

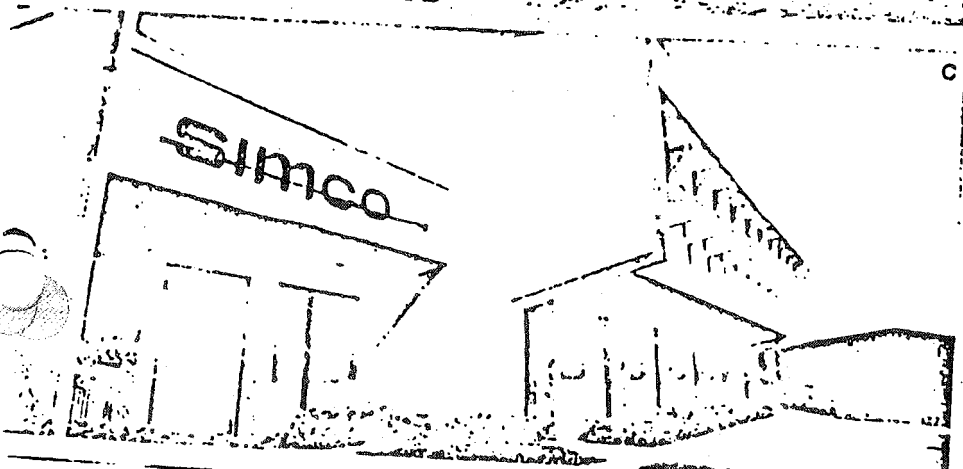
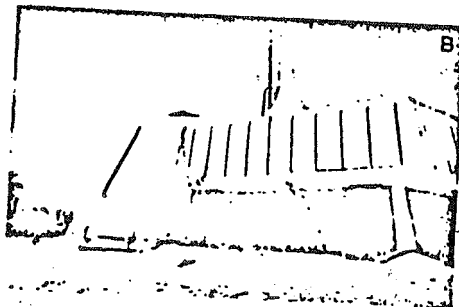
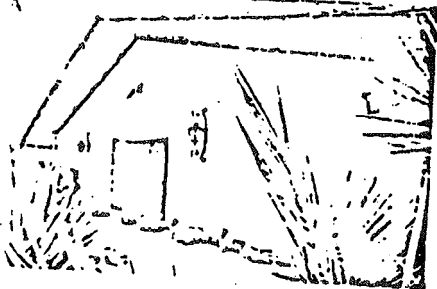
525 West Remington Building,
Sunnyvale.

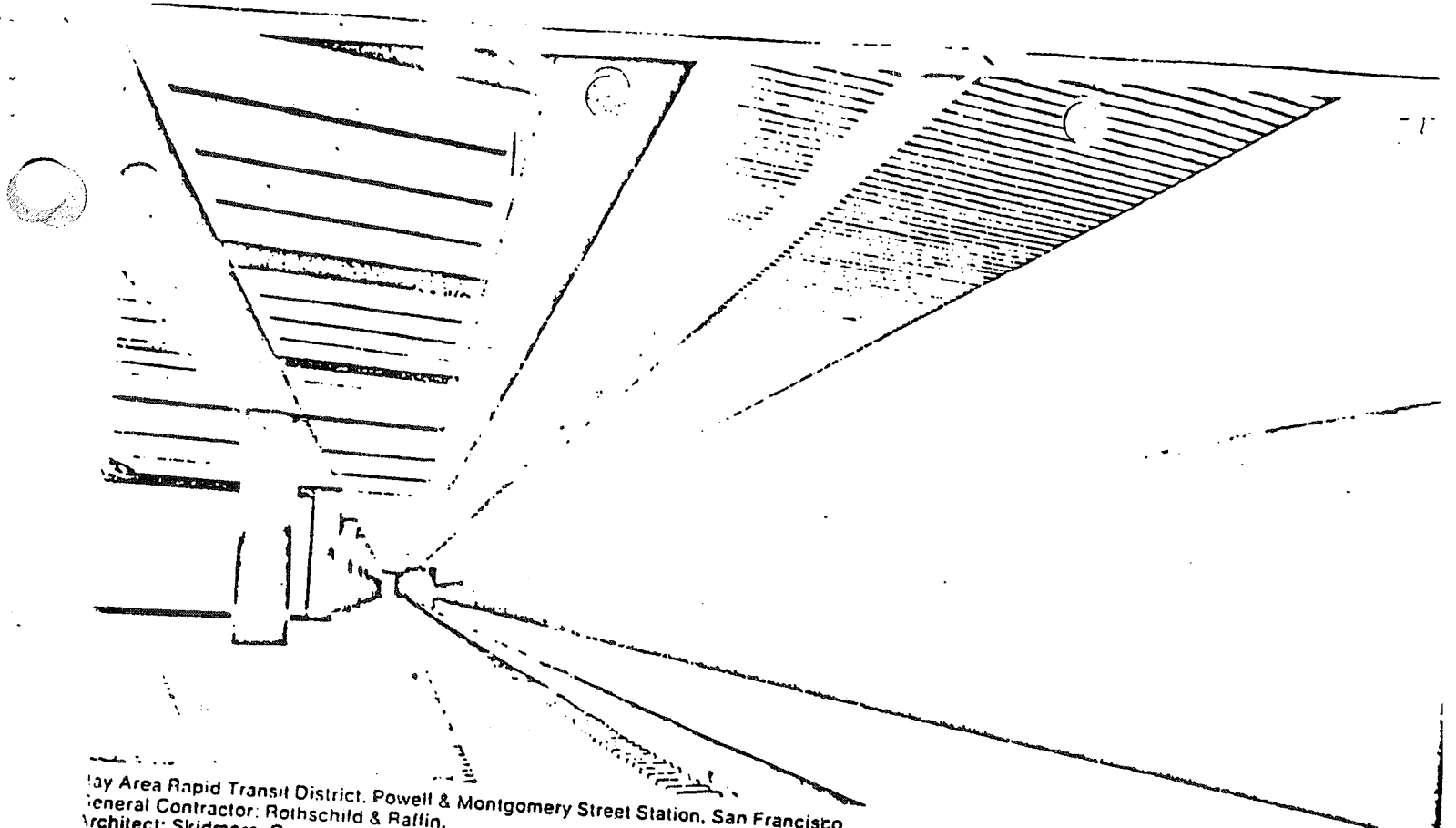
Owner: Nick Tikvica.
General Contractor: Oscar Liebert.
Architect: W. L. Carmen.

B. Valley Church, Cupertino.
General Contractor: Arthur Brothers.
Architect: Hawley & Peterson.

C. Pacific Maintenance Company Building,
San Jose.

Owner: Giulio Chiani.
General Contractor: G. C. Holvick &
Company.
Architect: M. O'Hearn.





Bay Area Rapid Transit District, Powell & Montgomery Street Station, San Francisco.
General Contractor: Rothschild & Raffin.
Architect: Skidmore, Owens & Merrill.

ease of application

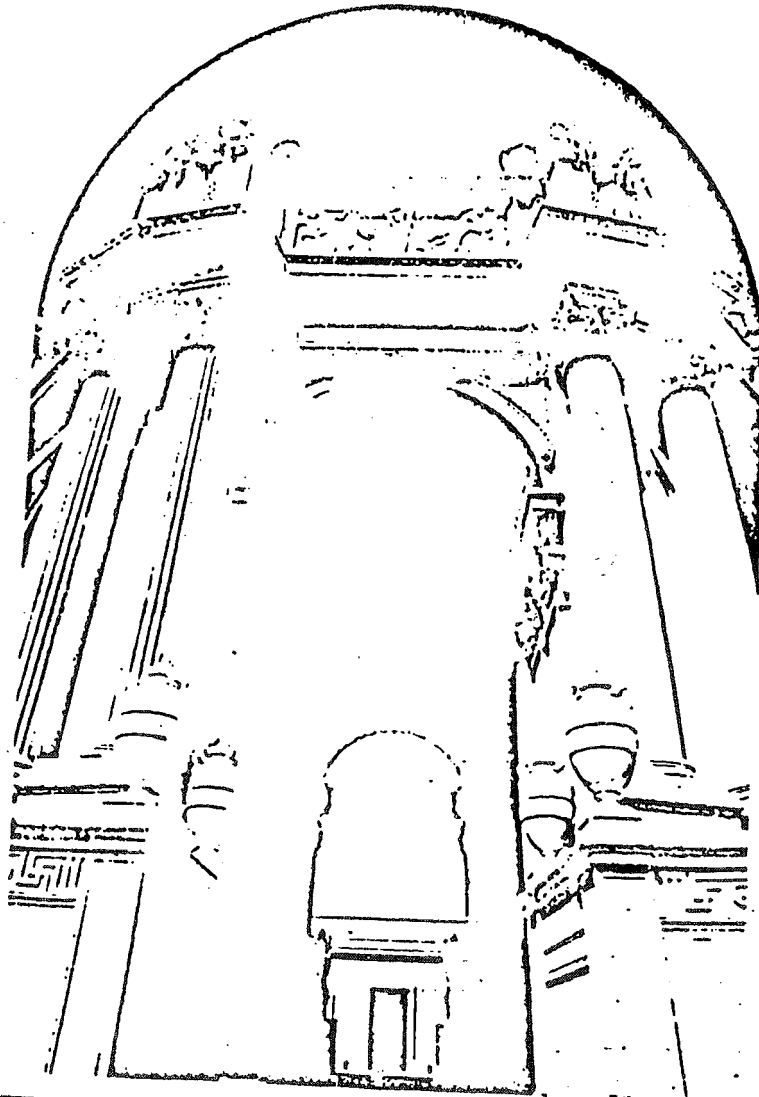
General Kaiser Permanente Plastic and Plastic Gun Cements can be applied with equal ease over metal lath, paper-backed wire fabric, concrete or concrete masonry; and, when proper preparations are made, over hard- or medium-burned brick and clay tile. Usually applied in two or three coats, plastic cement plasters produce non-combustible, vermin-proof walls with excellent insulating properties. Commercial stucco may be specified as the finish coat.

Kaiser Permanente Plastic Cement is applied manually with a trowel, and Plastic Gun Cement is applied with a plastering machine. Both have had plasterizing and air entraining additives accurately proportioned and blended with portland cement at Kaiser Cement plants to eliminate the labor and cost of additional weighing and mixing at the job-site. Plastic Gun Cement always contains a lubricating agent (asbestos) to facilitate pumping and to speed up on-site production. The plasticity and adhesive qualities of

**KAISER
CEMENT**

A guide to cement plastering

Kaiser Permanente plastic and plastic gun cements.



FINISHES

portland cement plaster

9

9

FINISHES

portland cement plaster

APPLICATION

Use a commercial spray unit, including air compressor, pump, connecting hoses and spray gun with nozzle. Adjust the fluid and air flow so as to apply an even coat of texture to a maximum of 1/8" thickness over the entire ceiling surface. Depending on method of application and desired pattern, each bag of K-Spray will decorate from 200 to 300 square feet of ceiling surface. For a heavy texture application, apply in two separate coats, allowing adequate drying time between coats. In addition, surfaces of unequal suction may require two coat application for best results.

Dry the sprayed texture surface rapidly. Maintain a minimum of 55° F. with adequate ventilation in the structure during application and drying.

NOTE

Do not use in areas of high humidity or dampness.

Use a respirator and eye protection during spray application.

TECHNICAL BULLETIN

**KAISER
GYPSUM**

DATE: October 1973

BULLETIN NO. 5703-A

WALLBOARD ACCESSORIES - K-SPRAY CEILING TEXTURE

DESCRIPTION

Kaiser K-Spray Ceiling Texture is a specially formulated dry powder which, when mixed with water, will provide a textured pattern and final white decoration for ceilings. The texture has been formulated for easy mixing, maximum coverage, excellent hide and white color, and easy application.

USES

Kaiser K-Spray is a premixed lightweight aggregate spray texture for use over gypsum wallboard or interior concrete ceilings. The polystyrene aggregate is proportioned to provide a coarse texture final ceiling finish. Designed for use with large capacity pumping systems which have continuous agitation in paste hoppers to prevent aggregate flotation. K-Spray is shipped in sacks, each sack containing a net weight of 32 pounds of K-Spray. A 1/8" thick texture will provide coverage of approximately 250 square feet of surface per sack.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Gypsum Wallboard

Prepare gypsum wallboard surfaces with Kaiser Joint and Finishing Compounds as directed. All joints and nail spots should be clean and dry prior to application of K-Spray Ceiling Texture. For best results, apply an alkyd type sealer over entire surface and allow to dry before texture application. A full coverage sealer application is recommended when K-Spray is applied during cold or humid weather conditions which will cause excessively slow drying of texture.

Concrete

All surfaces must be clean, dry, and sound with no chalkiness or efflorescence. Prime exposed wire and metal with rust preventive primer. New concrete ceilings should be aged at least 60 days before application of texture. Remove dirt, grease, and form oil. Irregularities in the concrete surfaces should be removed or filled with one or more applications of Kaiser Joint Compound allowing the first coat to dry before a second application. For best results, apply an alkyd type sealer over entire surface and allow to dry before texture application.

MIXING

Mix Kaiser K-Spray Ceiling Texture with clean, cool water only and do not contaminate with other materials. Add 32-pound sack of K-Spray to 5 to 6 gallons of water. Mix to a thick paste by slowly adding the dry powder to the water with continuous stirring with a mechanical mixer until the paste is lump-free. Remix after 15 minutes and adjust the paste to desired consistency. Do not over-thin. Mix only enough material that will be used within 24 hours. Keep paste covered when not being used and avoid exposure to direct sunlight or temperature in excess of 90° F. Remix immediately before use, or use continuous agitation in paste hopper during spray application.

Hand Application

A wide range of different texture effects can be obtained with Cover-Tex by texturing the painted surfaces with one or more of the following tools:

Brush, roller, sponge, whisk broom, wadded cloth, or a scrub brush

A celluloid triangle may be lightly drawn over a textured area to flatten high spots and produce a brocade effect. A sand finish can be obtained by adding a few handfuls of white silica sand to the mixed material.

DECORATION

Allow Cover-Tex to dry thoroughly before decorating.

TECHNICAL BULLETIN

**KAISER
GYPSUM**

DATE: October 1973

BULLETIN NO. 5707

WALLBOARD ACCESSORIES - COVER-TEX WALL TEXTURE

DESCRIPTION

- Kaiser Cover-Tex Wall Texture is a specially formulated dry powder which, when mixed with water, will provide various texture patterns when applied over gypsum wallboard surfaces. The texture is formulated for easy mixing, maximum coverage, excellent hide, easy application, and a white surface as a base for final decoration of walls or ceilings.

USES

Kaiser Cover-Tex is a dry powder texture designed for either hand or spray application for use as a base or final texture on gypsum wallboard walls or ceilings. It is particularly formulated to have good spraying qualities for both "fog" application and for heavy "splatter" patterns, with no sag or running of the texture. Color matched so that when used as a spray wall texture, it will match K-Spray Ceiling Texture.

A wide range of textures may be obtained by hand applying with a brush, sponge, roller, whisk broom, scrub brush, wadded paper, or cloth. A trowel dragged over a stippled area to knock down high spots will produce a brocade effect. Cover-Tex is shipped in 25- or 50-pound sacks. Depending upon the type and thickness of texture, a good approximation of coverage is 20 square feet per pound of dry powder.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

- All joints, fasteners, and irregularities shall be finished with Kaiser Joint Treatment Products; and the wallboard surface shall be clean and dry. For best results, seal all surfaces with a primer-sealer before applying the texture to equalize the suction between the wallboard and the joint treatment.

MIXING

Mix Cover-Tex using 2-1/2 gallons of clean, cool water per 25-pound sack. Add powder to water with continuous stirring with a mechanical mixer until the paste is smooth and lump-free. After letting stand for 15 to 30 minutes, remix and adjust paste to desired consistency. Mix only sufficient material for use within 24 hours and keep paste covered when not being used. Avoid exposure to direct sunlight or temperatures above 90° F.

White sand may be added to Cover-Tex when a sand finish is desired.

APPLICATION

Maintain a minimum of 55° F. with adequate ventilation in the structure during application and drying.

Spray Application

Use a commercial spray unit including an air compressor, pump, connecting hoses, and spray gun with nozzle. Adjust air pressure on spray gun to produce type of textured finish desired, such as a thin coat (fog spray), stipple finish or orange peel finish. Apply an even coat of texture material by moving the nozzle at a uniform rate across the surface. Spray ceilings first and then sidewalls. Use respirator and eye protection during spray application.

Pre-Mix Topping Compound (PMT)

A factory premixed polyvinyl acetate-base paste specially formulated for topping and finishing of wallboard joints. This material combines good workability features with minimum shrinkage and easy sanding. Use in temperatures of 55° to 110° F. Available in 4-gallon cartons. For the two coats, a 4-gallon carton will cover the joints on approximately 600 sq. ft. of wallboard surface.

Three-Purpose Pre-Mix (PM3)

An all-purpose polyvinyl acetate-base factory premixed paste for general use in taping, topping, and finishing joints in wallboard surfaces and for applying a texture to the wallboard surface. Ideally suited for general use for limited applications for the nonprofessional, the product is available in one-gallon plastic buckets. Use in temperatures from 55° F. to 85° F.

Wallboard Joint Tape

A specially manufactured high quality paper joint reinforcing tape provided with tiny perforations, chamfered and slit edges. Provides easy bedding with joint compounds and resists joint cracks, blisters, edge cracking, wrinkling, and ridging of the joints. Available in 75, 250, and 500 ft. rolls. A 500 ft. roll will cover the joints on approximately 1,000 sq. ft. of wallboard surface.

APPLICATION

Mixing - Mix dry powders with cool, clean water only. Use approximately 2 gallons of water per 25 pounds of dry compound. Add powder to water with continuous stirring with a mechanical mixer until the paste is smooth and lump-free. After letting stand for approximately 30 minutes, remix and adjust paste to desired consistency. Mix only sufficient material for use within 24 hours (3 hours for One-Day Joint Compound) and keep covered when not being used.

Premixed pastes generally require no mixing; however, they may be thinned with water and mechanically mixed to desired uniformity and consistency. Premix compounds may be stored for 6 months without souring under normal warehousing conditions. Avoid exposure to direct sunlight and temperatures in excess of 90° F. Prevent paste from freezing.

Application - Since there are a variety of joint treatment products, a number of methods of application are available. A particular method should be selected depending upon the type of job and prevailing climatic conditions.

Method 1 - (Basic application using Joint Compound (JC), Tape, and Finishing Compound (FC) (Average temperature 55° - 85° F.) Spread Joint Compound evenly over the joint and press the tape slowly into the compound. Press firmly for adhesion and elimination of entrained air. This material may be used for either hand application with a broadknife or with a mechanical tool, such as Ames tools. Allow the Joint Compound to dry for 24 to 72 hours, depending upon weather conditions. Following this, apply a coat of Finishing Compound to a width of 8" to 10" over the joint. Allow this to dry and follow with a second coat of Finishing Compound 10" to 12" wide. Allow to thoroughly dry and sand lightly to provide a smooth surface. The Finishing Compound may also be applied by mechanical means, such as with Ames tools. Nailheads and corner beads may be covered in a similar fashion, except that only one finish coat is normally required over corner beads where an additional texture is to be used.

Method 2 - (Basic method - use Three-Purpose Compound (JFT) and tape for entire process) (Average temperature 55° - 85° F.) Apply Three-Purpose Compound for all three coats using same techniques as described in Method 1.

Method 3 - (Basic method using Dual-Purpose Pre-Mix (PMW) and tape) (Use in temperatures 55° - 110° F.) Apply Dual-Purpose Pre-Mix (PMW) for all three coats in manner similar to that described in Method 1.

Method 4 - (Alternate method for cold climates using Joint Compound (JC), tape, and Dual-Purpose Pre-Mix (PMG) or Pre-Mix Topping Compound (PMT) (Average temperature 45° - 110° F.) Apply Joint Compound (JC), and tape as in Method 1 for the first coat and use Dual-Purpose Pre-Mix (PMG) or Pre-Mix Topping Compound (PMT) for the final two coats for colder climates.

Method 5 - (Fast method using One-Day Joint Compound (JOD), tape, and Finishing Compound (FC) (Average temperature 55° - 85° F.) Apply a coat of One-Day Joint Compound and embed tape similar to Method 1. Allow to harden (approximately three hours) and apply second coat of One-Day Joint Compound approximately 8" to 10" wide and allow to harden for another three hours. The final coat, 10" to 12" wide, is then applied using Finishing Compound. After this finishing coat has dried, sand lightly for a smooth surface. Nailheads and metal corner beads may be treated in the same manner.

Method 6 - (Fast method using One-Day Joint Compound (JOD), tape, and Dual-Purpose Pre-Mix (PMW) or Pre-Mix Topping Compound (PMT) (Average temperatures 55° - 110° F.) Similar application as Method 5 except use Dual-Purpose Pre-Mix (PMW) or Pre-Mix Topping Compound (PMT) as final finishing coat.

TECHNICAL BULLETIN

**KAISER
GYPSUM**

DATE: March 1972

BULLETIN NO. 5701-8

WALLBOARD ACCESSORIES - JOINT TREATMENT PRODUCTS DESCRIPTION, USE, AND APPLICATION

DESCRIPTION

Kaiser Joint Treatment Products are a group of dry powders (field mixed) and premixed paste used in conjunction with reinforcing tape to conceal the joints in gypsum wallboard surfaces.

TYPES AND USES

Several types of materials are available to provide various methods of joint concealment.

Joint Compound (JC)

A dry powder adhesive, formulated with high strength and adhesive qualities, whose primary use is to bond the reinforcing paper tape to the wallboard at the joints. Maintain minimum temperatures of 55° F. and maximum of approximately 85° F. during application. The material may be used for either hand or mechanical application. Twenty-five pounds of dry powder will cover the joints on approximately 1,000 sq. ft. of wallboard surface. This material may also be used to fill surface irregularities, conceal nailheads, cover corner beads, and as a surface texture. Available in 25- and 10-pound bags; 5-pound boxes; and in 18- and 5-pound boxes in combination with wallboard tape.

Finishing Compound (FC)

A specially formulated dry powder topping compound designed primarily for use as a second and third coat application in conjunction with Joint Compound. This material provides a high quality finish that is easy to sand and has good workability for both hand and mechanical application. Maintain a minimum temperature of 55° F; maximum temperature is unlimited except open time decreases rapidly. For the two coats, approximately 50 pounds of material is required to cover the joints on 1,000 sq. ft. of wallboard surface. Available in 25-pound bags.

One-Day Joint Compound (JOD)

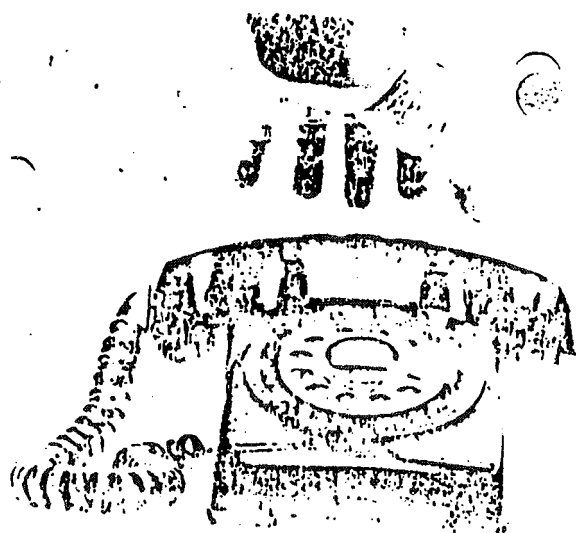
A specially formulated bedding and topping compound which allows complete finishing of wallboard joints within a single day. It hardens in approximately one hour (Fast Set type) or three hours (Slow Set type) so that when used as the first two coats, it allows time to apply the Finishing Compound to complete the job in one day. Use under same temperature conditions as Joint Compound. Two coats of this material will provide coverage for approximately 1,000 sq. ft. with 80 pounds of material. Available in 25-pound bags.

Three-Purpose Compound (JFT)

An all-purpose dry powder compound which is used for taping, topping, and finishing of wallboard joints. In addition, it can be used for texturing wallboard surfaces. This material blends the major features for adhesion, strength, and finishing quality contained in other types of joint or finishing compounds. Use in temperatures from 55° F. to 85° F. An excellent all-purpose type of product supplied in 25-pound bags. Three-coat joint treatment will require approximately 75 pounds to cover wallboard joints on 1,000 sq. ft. of wallboard surface.

Dual-Purpose Pre-Mix (PMW)

A factory premixed polyvinyl acetate-base paste specially formulated for taping, topping, and finishing in preparation for final decoration. Designed for use in temperatures from 55° F. to 110° F. Available in 5-gallon cans or 4- or 5-gallon cartons. Ten gallons will cover the joints on approximately 1,000 sq. ft. of wallboard surface.



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Joint Treatment Products
Rated Sound Deadening Board
Finishing Compound
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K-Spray Ceiling Texture
Speed Studs and Track—1 $\frac{5}{8}$ ", 2 $\frac{1}{2}$ ", 3 $\frac{5}{8}$ "
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**KAISER
GYPSUM**

KAISER GYPSUM COMPANY, INC.
KAISER CENTER, 300 LAKESIDE DRIVE, OAKLAND, CALIFORNIA 94604

KAISER GYPSUM

NULL-A-FIRE

5 7/8" GYPSUM WALLBOARD

ONE HOUR FIRE RESISTANCE

AS TESTED BY THE BUREAU OF STANDARDS
ASTM Designation: G-19

- NON-LOAD BEARING PARTITIONS
- LOAD BEARING PARTITIONS
- CEILING CONSTRUCTION

A PRODUCT OF

ooo **KAISER GYPSUM**
ooo COMPANY, INC.
ooo LOS ANGELES

BUILDING CODE ACCEPTANCE

ICBO Research Report No. 2075 covers Designs 23 - 1 hr. and Design 88 - 2 hr., for use of the lay-in panels with Kaiser Fire-Rated Grid.

MAINTENANCE

Kaiser Fire-Rated Acoustical Products may be easily cleaned with mild soap and water, wallpaper cleaner, or a vacuum cleaner. They also may be repainted a number of times using a brush, or spray gun, without loss of sound absorption, provided reasonable care is taken to keep the holes open.

LIMITATIONS

Kaiser Fire-Rated Acoustical Products are not recommended for use in areas where they will be subject to impact or abuse, or in areas of excessive or continuing high humidity.

SOUND ABSORPTION

High sound absorption values tested in accordance with ASTM Method of Test for Sound Absorption of Acoustical Materials in Reverberation Rooms Designation C 423-60T.

Pattern	Thick- ness	Mounting	Sound Absorption Coefficients						NRC Spec. Range
			125 cps	250 cps	500 cps	1000 cps	2000 cps	4000 cps	
Swirl Pin-Punched Lay-In	1/2"	7	.27	.32	.54	.78	.66	.49	.55 - .65
	5/8"	7	.33	.43	.66	.84	.68	.56	.65 - .75
Fissured Lay-In	1/2"	7	.23	.30	.51	.79	.78	.74	.55 - .65
	5/8"	7	.24	.34	.61	.87	.85	.82	.65 - .75
Non-directional Fissured Lay-In	5/8"	7	.24	.32	.53	.81	.84	.76	.65 - .75
Fissured Tile	5/8"	7	.35	.36	.63	.74	.64	.61	.50 - .60
Swirl Pin-Punched Tile	5/8"	7	.35	.36	.68	.67	.47	.32	.50 - .60

Mounting No. 7 - Mechanically mounted on metal supports - 16" air space.

SOUND ATTENUATION

When used in suspended ceilings with ceiling-height partitions, Kaiser Fire-Rated Acoustical Products provide a high sound transmission loss value when tested in accordance with Acoustical Materials Association Tentative Method of Test AMA-I-II "Ceiling Sound Transmission Test by the Two-Room Method."

Pattern	Thick- ness	Standard Mounting	Attenuation Factors - Decibels - AMA I-II - 1963											Ceiling STC
			125 cps	175 cps	250 cps	350 cps	500 cps	700 cps	1000 cps	1400 cps	2000 cps	2800 cps	4000 cps	
Fissured Tile	5/8"	CCF	32	36	35	38	40	42	49	55	57	53	48	40 - 44

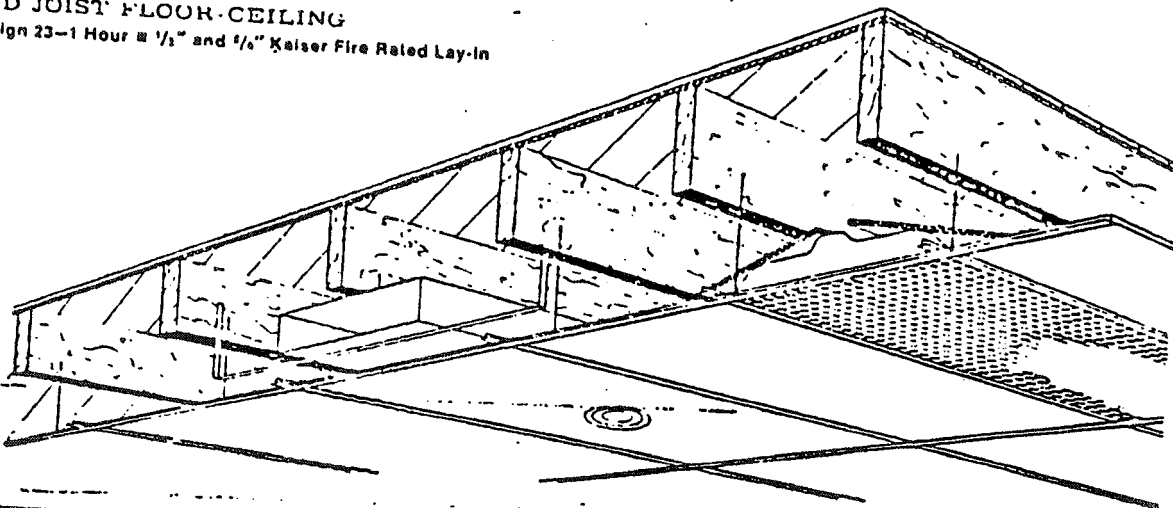
Pattern	Thick- ness	Standard Mounting	Attenuation Factors - Decibels - AMA I-II - 1967																Ceiling STC
			125 cps	160 cps	200 cps	250 cps	315 cps	400 cps	500 cps	630 cps	800 cps	1000 cps	1250 cps	1600 cps	2000 cps	2500 cps	3150 cps	4000 cps	
Swirl Pin- punched Lay-In	1/2"	CE (H)	32	40	38	29	29	33	32	32	33	36	40	46	51	55	56	56	35 - 39 40 - 44
	5/8"	CE (H)	33	42	40	31	31	35	34	36	38	41	46	52	55	57	57	57	
Fissured Lay-In	1/2"	CE (H)	29	38	37	29	28	31	31	33	33	36	39	43	47	51	54	56	35 - 39 35 - 39
	5/8"	CE (H)	31	40	37	30	30	33	33	35	36	39	43	47	51	53	53	52	

APPLICATION RECOMMENDATIONS

Kaiser Fire-Rated Acoustical Products must be mechanically mounted on metal supports, as detailed in the following, to produce the listed fire ratings. Kaiser Fire-Rated Grid may be used with the lay-in panels in Designs 23 - 1 hour and 88 - 2 hours. See Technical Bulletin 273 for details of this grid.

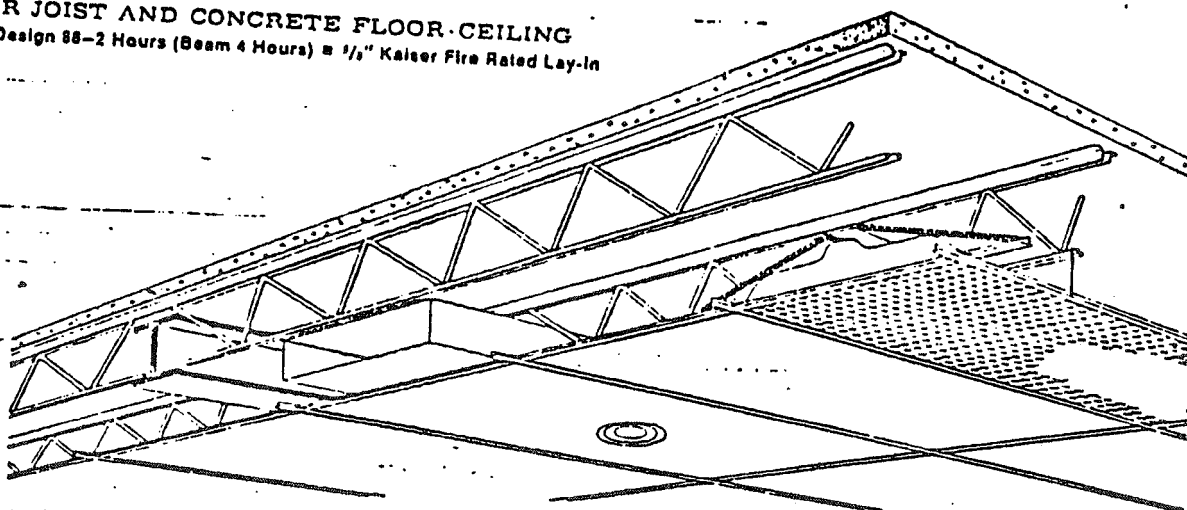
WOOD JOIST FLOOR-CEILING

UL Design 23-1 Hour $\frac{1}{2}$ " and $\frac{5}{8}$ " Kaiser Fire Rated Lay-In



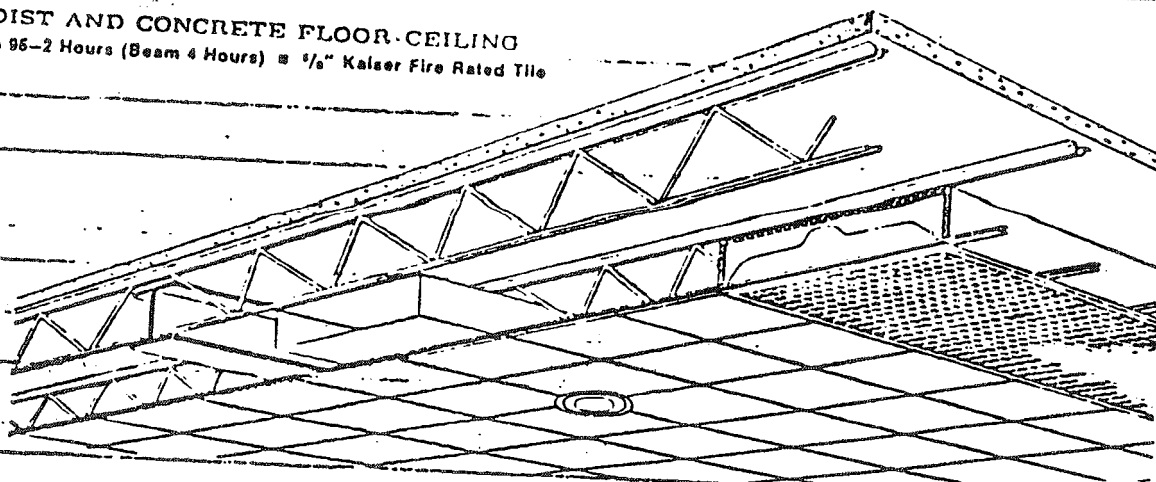
BAR JOIST AND CONCRETE FLOOR-CEILING

UL Design 88-2 Hours (Beam 4 Hours) $\frac{1}{2}$ " Kaiser Fire Rated Lay-In



BAR JOIST AND CONCRETE FLOOR-CEILING

UL Design 95-2 Hours (Beam 4 Hours) $\frac{1}{2}$ " Kaiser Fire Rated Tile



NULL-A-FIRE

1 HOUR FIRE RESISTANT

5" KAISER GYPSUM WALLBOARD

STANDARD SPECIFICATIONS

1. SCOPE OF WORK

This contractor to provide all labor, material, equipment and appliances necessary for installing the wallboard shown on drawings, schedules, or as herein specified as follows:

- Walls
- Ceilings
- Joint treatment (omit if not general practice in locality)

2. MATERIALS

Shall be Kaiser Gypsum NULL-A-FIRE Wallboard as manufactured by Kaiser Gypsum Company in accordance with ASTM Specification C-36 and Federal Specification SS-W-51a, $\frac{5}{8}$ " thick, at locations shown on drawings and/or schedules.

Nails shall be as follows: 6d, 13 $\frac{1}{2}$ ga., cement coated, flat-head, 1 $\frac{1}{4}$ " long.

Material for treating joints and concealing nailheads shall be Kaiser Joint Cement System.

3. APPLICATION

This contractor to check all work upon which he is to apply wallboard, and report to Contractor any work not true, plumb and not complying with local ordinances or true intent of drawings and specifications.

Kaiser Gypsum NULL-A-FIRE panels in lengths as long as

possible shall be applied with back toward framing members and nailed directly to studs and joists. Starting with ceilings first, panels shall be applied with long edges perpendicular to framing members. All panels shall be in moderate contact and butted loosely together with none forced into place. All mill or cut ends shall be supported on framing members and joints shall be staggered. Joints on opposite sides of partitions shall not fall on the same stud. Where possible, full length panels shall extend above and below openings. Avoid "piecing."

Nails shall be spaced 5" to 7" apart on ceilings and 6" to 8" apart on walls, and not less than $\frac{3}{4}$ " from edges and ends of wallboard. Drive nails "home" with heads slightly below the surface, taking care not to break the face paper. Do not use a nail set.

Joints and nail heads shall be treated with Kaiser Joint Cement System mixed and applied in accordance with manufacturer's directions.

All external angles shall be protected by the application of a taped metal cornerboard reinforced with Kaiser Joint Cement System. Internal angles shall be reinforced with Kaiser Joint Cement System.

Kaiser Gypsum NULL-A-FIRE $\frac{5}{8}$ " wallboard is manufactured under constant inspection by Underwriters' Laboratories and subject to approval in accordance with Underwriters' Label Service.

SPECIFICATION SUMMARY & DESCRIPTIVE DATA

TYPE	THICKNESS	WIDTH	LENGTH	EDGE	PACKAGING	APPROX. LBS. PER M.S.F.	RECOMMENDED SUPPORT SPACING	NAILS USED	NAIL SPACING	NAILS: LBS. PER M.S.F.	JOINT TREATMENT	DECORATION
NULL-A-FIRE	$\frac{5}{8}$ "	4'	6'-12'	Tapered Recessed Beveled or Square	2 sheets per bundle	2,700	16" or 24" o.c.	6d c.c.	ceilings: 5"-7" walls: 6"-8"	7	Kaiser Joint Cement System	Paint or Wallpaper

KAISER NULL-A-FIRE WALLBOARD

A superior gypsum wallboard officially rated as one-hour fire resistant for:

- Non-load bearing partitions
- Load bearing partitions
- Floor-ceiling construction

in wood frame construction, as determined by official testing laboratories in accordance with A.S.T.M. Designation E119, Standard for Fire Tests of Building Construction and Materials.

Superior because the core of this wallboard contains highly fire resistant gypsum in combination with:

Glass Fibers—incombustible strands acting in much the same manner as reinforcing mesh in a concrete slab, as a "bonding mesh" adding strength and toughness to the

board, making it easier to handle in the warehouse and on the job.

Expanded Perlite—acting as an insulator or fire retardant, absorbing thermal "shock," at the same time contributing to a reduction of weight of the core, and improving nailability.

Balanced quantities of these ingredients together with the inherent fire resistant characteristics of gypsum form a highly effective fire barrier insuring safety with economy of construction.

Superior in all respects, including flexural strength, to the A.S.T.M. requirements for wallboard of this type, based on official tests noted above.

WOOD JOIST FLOOR-CEILING ASSEMBLY

Underwriters' Laboratories, Inc., Design 23—1 Hour, $\frac{1}{2}$ " or $\frac{1}{4}$ " Kaiser Fire Rated Acoustical Lay-In Board.

ELEMENTS OF THE CONSTRUCTION:

1. FINISH FLOOR—1" x 4" T&G.
2. BUILDING PAPER—Commercial red rosin, 0010 thick
3. SUB-FLOOR—1" x 6" T&G laid diagonally.
4. BRIDGING—1" x 3" wood.
5. WOOD JOISTS—2" x 10" Douglas Fir, Standard grade (1200 psi) at 16" o.c.
6. HANGER WIRE—No. 12 galvanized steel wire gauge attached to wood joists or supplemental 2" x 4" hanger wire supports. Wire spaced 48" o.c. for main beams and 24" o.c. for cross tees
7. STEEL SUSPENSION SYSTEM—Listed by Underwriters Laboratories, Inc. in the Building Materials List, Guide No. 40 U18 18. Main runners, 12 ft long, spaced 48" o.c. Cross tees, 4 ft long spaced 24" o.c., and 2 ft long spaced parallel to main beams.

8. ACOUSTICAL LAY-IN BOARD— $\frac{1}{2}$ " or $\frac{1}{4}$ " by 24" x 48" (nominal) Kaiser Fire Rated Acoustical Lay-In Panels

Border units supported by No. 24 gauge painted steel border angles, 1" x $\frac{3}{4}$ ".

9. HOLD-DOWN CLIPS— $\frac{1}{4}$ " x $\frac{3}{4}$ " deep, .023" electrogalvanized steel. Two clips uniformly spaced (one per 24" length of panel) on each cross tee

10. PENETRATIONS—

(a) Recessed-Type Electric Fixture—Listed by Underwriters Laboratories, Inc. in the Electrical Construction Materials List, Guide No. 120 12.18. 2 ft wide by 4 ft long Fixture housing to be of steel. Spacing not to exceed 16 sq ft per 100 sq ft of ceiling area.

(b) Mineral Wool Ball Light Fixture Cover—Listed by Underwriters Laboratories, Inc. in the Building Materials List, Guide No. 40 U18 2. Two 2" x 48" x $\frac{1}{4}$ " pieces, cut from 21" x 48" x $\frac{1}{4}$ " balls, laid along the long dimensions of the fixture and against the suspension member supporting the fixture. Two 17" x 48" x $\frac{1}{4}$ " pieces, cut from 21" x

48" x $\frac{1}{4}$ " balls, slit for the hanger wires at the midspan of the fixture, placed to rest on each side of the fixture and the adjacent tile, and wire-tied to the hanger wires at the corners of the fixture. Two $4\frac{1}{2}$ " x 24" x $\frac{1}{4}$ " pieces, cut from 21" x 48" x $\frac{1}{4}$ " balls placed on top of the tile at each end of the fixture and wire-tied to the hanger wires at the corners of the fixtures

(c) Air Duct—Duct opening not over 111 sq. in. per 100 sq ft of ceiling area. Outside surface of duct throat protected with $\frac{1}{8}$ " inch of asbestos paper. Duct supported by $\frac{1}{2}$ " inch No. 16 gauge steel channels bolted to $\frac{1}{4}$ " inch wide No. 21 gauge steel straps which are secured to wood joists with two 16d nails at each side at least 4 inches above lower chords of joists. Duct supports spaced 40 inches o.c. Installed so that return air blower system shuts down automatically in fire.

(d) Damper—15 inch square, No. 14 gauge protected with $\frac{1}{8}$ " inch of asbestos paper on both faces. Held open with fusible link, listed by U.L., Inc., Guide No. 120 UO.

BAR JOIST AND CONCRETE FLOOR-CEILING ASSEMBLY

Underwriters' Laboratories, Inc., Design 88—2 Hours (Beam 4 Hours), $\frac{1}{2}$ " Kaiser Fire Rated Acoustical Lay-In Board.

ELEMENTS OF THE CONSTRUCTION:

1. SAND AND GRAVEL CONCRETE—1-2 $\frac{1}{2}$:3 mix, 3400 psi strength.
2. WIRE FABRIC—No. 10 steel wire gauge, 6" x 6" mesh
3. METAL LATH—Expanded, $\frac{1}{8}$ " ribbed, 3/4 lb. attached to joists with No. 18 gauge SWG galvanized wire, spaced 9" o.c. and at edge overlap between joists.
4. BRIDGING— $\frac{1}{2}$ " diameter steel bridging bars.
5. STEEL JOISTS—8" Type 8J2, spaced 24" o.c. and welded to supports.
6. STEEL BEAMS—8" Type 8WF31.
7. HANGER WIRE—No. 12 galvanized steel wire gauge attached to steel joists or supplemental $\frac{1}{2}$ " cold rolled channel, spaced 48" o.c. on main beams.
8. STEEL SUSPENSION SYSTEM—Listed by U.L., Inc. in the Building Materials List.

Guide No. 40 U18 18. Main runners, 8 ft long spaced 24" o.c., cross tees 2 ft long spaced 48" o.c.

9. ACOUSTICAL LAY-IN BOARD— $\frac{1}{2}$ " x 24" x 48" or 24" x 24" (nominal) Kaiser Fire Rated Acoustical Lay-In Panels

Border units supported by No. 24 gauge painted steel border angles, 1" x $\frac{3}{4}$ ".

10. HOLD-DOWN CLIPS— $\frac{1}{4}$ " x $\frac{1}{4}$ " x $\frac{1}{2}$ ", 27 gauge electrogalvanized steel. Two clips uniformly spaced (one per 24" length of panel) on each cross tee.

11. PENETRATIONS—

(a) Recessed-Type Electric Fixture—Listed by Underwriters Laboratories, Inc. in the Electrical Construction Materials List, Guide No. 120 12.18. 2 ft wide by 4 ft long Fixture housing to be of steel. Spacing not to exceed 24 sq ft. per 100 sq. ft. of ceiling area.

(b) Mineral Wool Ball Light Fixture Cover—Listed by Underwriters Laboratories, Inc. in the Building Materials List, Guide No. 40

U18 2. Two 2" x 48" x $\frac{1}{4}$ " pieces, cut from 21" x 48" x $\frac{1}{4}$ " balls, laid along the long dimensions of the fixture and against the suspension member supporting the fixture. Two 17" x 48" x $\frac{1}{4}$ " pieces, cut from 21" x 48" x $\frac{1}{4}$ " balls, slit for the hanger wires at the midspan of the fixture, placed to rest on each side of the fixture and the adjacent tile, and wire-tied to the hanger wires at the corners of the fixture. Two $4\frac{1}{2}$ " x 24" x $\frac{1}{4}$ " pieces, cut from 21" x 48" x $\frac{1}{4}$ " balls placed on top of the tile at each end of the fixture and wire-tied to the hanger wires at the corners of the fixtures.

(c) Air Duct—Duct opening not over 70 sq. in. per 100 sq ft. of ceiling area. Outside surface of duct throat protected with $\frac{1}{8}$ " inch of asbestos paper. Duct supported by $\frac{1}{2}$ " inch No. 16 gauge steel channels. Installed so that return air blower systems shuts down automatically in fire.

(d) Damper—15 inch square, No. 14 gauge protected with $\frac{1}{8}$ " inch of asbestos paper on both faces. Held open with fusible link, listed by U.L., Inc., Guide No. 120 UO.

BAR JOIST AND CONCRETE-CEILING ASSEMBLY

Underwriters' Laboratories, Inc., Design 95—2 Hours (Beam 4 Hours), $\frac{1}{2}$ " Kaiser Fire Rated Acoustical Tile.

ELEMENTS OF THE CONSTRUCTION:

1. SAND AND GRAVEL CONCRETE—1-2 $\frac{1}{2}$:3 $\frac{1}{2}$ mix 3900 psi strength.
2. WIRE FABRIC—No. 10 steel wire gauge, 6" x 6" mesh
3. METAL LATH—Expanded, $\frac{1}{8}$ " ribbed, 3/4 lb. attached to joists with No. 18 gauge SWG galvanized wire, spaced 9" o.c. and at edge overlap between joists
4. BRIDGING— $\frac{1}{2}$ " diameter steel bridging bars
5. STEEL JOISTS—8" Type 8J2 spaced 24" o.c. and welded to supports.
6. STEEL BEAMS—8" Type 8WF31.
7. HANGER WIRE—No. 12 SWG galvanized wire, wire-tied to lower chord of joists, spaced not over 48" o.c. on cold-rolled channels and at all four corners of light fixtures.

8. COLD-ROLLED CHANNELS—No. 16 gauge cold-rolled steel, $\frac{1}{4}$ " deep channels spaced not over 48" o.c. and along the long sides of each light fixture. Additional channels arranged to form a frame around air-duct outlets

9. Z RUNNERS—No. 26 gauge steel, $\frac{1}{2}$ " deep with $\frac{1}{4}$ " and $\frac{1}{8}$ " flanges spaced 16"

o.c. Attached to cold-rolled channels with "Z" runner clips. Where runners are interrupted at lights, their ends are attached to cold-rolled channels with "Z" runner clips, and with the upper flanges and upper half of webs at the ends cut back $\frac{1}{4}$ " with the lower portion of web and entire lower flange remaining. "Z" runner splices made of No. 26 gauge electrogalvanized steel, 5" long, $\frac{1}{4}$ " high, and $\frac{1}{4}$ " deep. End clearances $\frac{1}{4}$ " at splices and $\frac{1}{4}$ " at walls. Short pieces of "Z" runners are placed in lateral joints at ends of light-fixture boxes and air-duct outlet, secured with "Z" runner clips

10. Z RUNNER CLIPS—No. 12 SWG galvanized wire, placed over cold-rolled channels and fastened to "Z" runners. Maximum spacing 48" o.c.

11. ACOUSTICAL TILE— $\frac{1}{2}$ " x 12" x 12" T&G Kaiser Fire Rated Acoustical Tile

Border tile supported by No. 24 gauge painted-steel wall channel, $\frac{1}{4}$ " deep with $\frac{1}{4}$ " legs, along with one spring clip between tile and border channel, made of No. 26 gauge spring steel, $\frac{1}{8}$ " deep, $\frac{1}{4}$ " wide, and 4" long. One spring clip must be used with each border tile

12. PENETRATIONS—

(a) Recessed-Type Electric Fixture—

Materials List, Guide No. 120 12.18. Fixtures of 2' x 4' size with steel housing or enclosure and hardware, with spacing not to exceed 16 sq. ft. per 100 sq. ft. of ceiling area.

(b) Light-Fixture Yoke—Two per light fixture assembly, spaced 36" o.c. No. 16 gauge steel channel each supplied with two steel studs 4" long, to hold light-fixture protection boxes and light fixtures. Attached to cold-rolled channels with No. 18 gauge steel clamps bolted to brackets

(c) Light-Fixture Protection Boxes—Made of $\frac{1}{4}$ " thick Kaiser Fire Rated Accessory Board. Each box consists of two side pieces, $4\frac{1}{4}$ " by 50 $\frac{1}{2}$ ", two end pieces $4\frac{1}{4}$ " by 23 $\frac{1}{2}$ ", and one top piece 25 $\frac{1}{4}$ " x 50 $\frac{1}{2}$ ". Assembled with six common nails spaced 6" o.c. on top of the box and 3" o.c. at the sides

(d) Air Duct—Duct opening not over 55 sq. in. per 100 sq ft. of ceiling area. Outside surface of duct throat protected with $\frac{1}{8}$ " thick asbestos paper. Duct supported by $\frac{1}{2}$ " cold-rolled channels bolted to No. 20 gauge galvanized-steel duct hangers bent over lower chord of joists and bolted, spacing not over 36" o.c.

(e) Damper—15" square, No. 12 gauge steel protected with $\frac{1}{8}$ " thick asbestos paper on both surfaces

TECHNICAL BULLETIN

KAISER GYPSUM

DATE: September 1969

BULLETIN NO. 226-D

KAISER FIRE-RATED ACOUSTICAL PRODUCTS

DESCRIPTION

Kaiser Fire-Rated Acoustical Products are manufactured by a new wet felting process using mineral wool fibers felted together and pressed into a rigid acoustical panel. Acoustical products made with this process provide a product which offers an excellent resistance to fire when used in certain floor-ceiling assemblies. In addition, the product has an excellent resistance to sound transmission, has high sound absorption, is incombustible, and is a strong, dimensionally stable acoustical product. The exposed painted surface is provided with a choice of patterns for decorative finish.

PATTERNS

Swirl Pin-Punched

Random punched perforated, approximately 1700 holes per sq. ft., 0.070" and 0.040" diameters.

Fissured

Fissured and random pin-punching.

Non-Directional Fissured

Non-directional fissured, perforated

SPECIFICATIONS

Pattern

Swirl Pin-Punched

Fissured

Non-Directional Fissured

Federal Specification

SS-S-118a, Type III, Pattern c, Class 25

SS-S-118a, Type III, Pattern d, Class 25

SS-S-118a, Type III, Pattern d, Class 25

STANDARD THICKNESSES, SIZES, AND JOINTS - All patterns

1/2" x 24" x 48" (nominal) - square edges

5/8" x 24" x 48" (nominal) - square edges

5/8" x 24" x 24" (nominal) - square edges

5/8" x 12" x 12" - T&G edges

FINISH

White washable, Class A (incombustible)

LIGHT REFLECTION

Class a (over .75)

FIRE HAZARD CLASSIFICATION (FLAME SPREAD)

Underwriters' Laboratories, Inc.

FIRE RESISTANCE CLASSIFICATION

Underwriters' Laboratories, Inc.

Flame Spread	20
Fuel Contributed	20
Smoke Developed	5

1/2" Lay-In

Design 23 - 1 hr.

5/8" Lay-In

Design 23 - 1 hr. and

5/8" Tile

Design 88 - 2 hr.

Design 96 - 2 hr.

- 1
2
3
4
5
6
7
8
9
- B. Whether warranty was oral or written;
C. How it was given to purchasers of these products.

ANSWER: Kaiser Cement & Gypsum sets forth a standard warranty on all sales of their products on the back side of the sales order form. See attached form.

39. Did you, at the time of manufacture or sale of asbestos products, make any disclaimer, limitation, or exclusion of warranty concerning the quality, use or benefits of these products?

ANSWER: Kaiser Cement & Gypsum has only sold products that contained a very small percentage of asbestos. These products were sold under our standard warranty set forth in our Terms and Conditions of Sale. Such Terms and Conditions of Sale included certain disclaimers, limitations, or exclusions of warranty concerning the quality, use or benefits of these products.

40. If your answer to Interrogatory No. 39 above is in the affirmative, please state:

- A. Specific language of disclaimer, limitation, or exclusion of warranty given (or attach copy);
B. Whether the disclaimer, limitation or exclusion was oral or written;
C. How it was given to purchaser of this product;
D. Name and address of each person in custody of specific disclaimer of warranty.

ANSWER: A. A copy of our standard Terms and Conditions of Sale is attached.

B. The disclaimers, limitations or exclusions are in writing.

C. Terms and Conditions of Sale were printed on all customer invoices until January 1, 1976; on all Bills of Lading or notices of shipment to customers from at least December, 1972, through the year 1976; and on all price bulletins to customers starting

TERMS AND CONDITIONS OF SALE

NOTIFICATION OF OBJECTION TO THESE TERMS AND CONDITIONS OF SALE WITHIN A REASONABLE TIME SHALL BE DEEMED AN ACCEPTANCE THEREOF AND A CONTRACT SHALL BE FORMED ONLY UPON SUCH TERMS AND CONDITIONS OF SALE.

1. PRICE.

It is further ordered, that the same subject be submitted to a public auction by the seller's broker on the 14th day of March, 1884, at 10 o'clock, a.m., at the public office of the said broker, in the city of New York, and all terms, conditions, and particulars, in and out of this instrument, and all terms, conditions, and particulars hereof, which may be provided by the transaction, and all necessary documents, shall be referred to the prospectus and shall be paid by the Purchaser.

2. TERMS OF PAYMENT

Cash discount, when applicable, will be stated on each individual invoice and will be allowed only if taken within the time stated thereon, and provided there are no past due items. Otherwise, the amount of invoice will be payable by the Purchaser on or before the last day of the month in which a cash discount would have been allowed or, if stated on the face of the invoice, there is a provision that has a later date for the payment of the invoice. There is no provision for a cash discount on the amount of any payment (PPH PER ANNUM) in payment of an invoice. Invoices shall be payable by the Purchaser within 10 days of the invoice date, unless otherwise specified. Payment received by the Purchaser shall be credited to the account of the Supplier.

2. CREDU

Ad. Another rule adopted by the general meeting of the General Sales Office of the British Sales Company is the right to report any order, as well as the right to refuse its own performance. If at any time a seller denies the financial responsibility of the Purchaser or voluntarily, for reasons, the right to require payment in advance, or other security or arrangement that payment will be prompt by word when due. If the Purchaser fails to comply with the terms of payment or declines or to cancel the order, the Seller shall have the right to cancel the order, shall thereupon become due and payable, without prejudice to any claims for damages Seller may be entitled to make.

4. DELIVERY AND SHIPMENT

[illegible][illegible]

5 GENERAL LIABILITY

policy effort will be made to make delivery as promptly as possible. And the longer delivery is made, the more difficult it becomes for the bank as well as the government to deliver. In some cases it will be better for banks to delay in purchasing or delivery of foreign currencies or making use of them in international payments. They will not be taken to task for any delay in international payments or in the amount or manner of any movement of governmental expenditures, agency or business in any other policy or program of general public interest or pressing priorities, allocations, limitations, or other estimates, which affect manufacturing or delivery in general, if any other cause or occurrence beyond Sellers control, including but not limited to such occurrences as revolutions, wars (declared or undeclared), acts of the public enemy, fires, earthquakes, or other floods, windstorms, tornadoes, cyclones, tidal waves, lightning, earthquakes, or other acts of God, explosions, sabotage, land slides, ambiguous natural law restrictions, damage, destruction or breakdown of any kind of Sellers equipment or facilities, necessary for performance hereunder arising from any cause whatsoever, or any failure of usual sources of supply of materials, equipment or services, or shortage of transportation facilities or equipment, shortage of labor, facilities, time and funds, are present or future, but not negligence, wherever it may be, or controlled risk not constituted or assumed by any Government or its instrumental corporation, agency or foreign affiliate, subsidiary or institution, whether the risk of the present or future loss is caused

6. YARDANIY

SELLER'S EXPRESS WARRANTIES. SELLER WANTS TO STATE THAT THE PRODUCTS SOLD BY IT ARE COVERED BY THE FOLLOWING EXCLUDED WARRANTIES OF THE PRODUCTS: SELLER MAKES NO WARRANTY OF ANY KIND, WHATSOEVER, EXPRESS OR IMPLIED, AND ALL WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND OTHER WARRANTIES OF WHATEVER KIND, ARE HEREBY DISCLAIMED BY SELLER AND EXCLUDED.

Seller shall have the right, at its sole option, to replace or repair any defective products, to refund the purchase price or to grant a reasonable allowance as an out-of-pocket damage award, in any event, Seller's total duty for defective product shall be limited to the extent specified hereinafter provided in paragraph 8A hereof.

11. SELLER ASSUMES NO LIABILITY FOR ANY FAILURE OR PURCHASER'S SPECIFICATIONS TO MEET PURCHASER'S REQUIREMENTS

7 מציאות

Each buyer shall inspect Seller's products before commencing installation and if, for any reason, Seller's products are accepted as satisfactory, the buyer shall notify Seller before installation is commenced. Seller shall not be liable for any claims made after the commencement of installation.

CLAIMS

Any claims or demands by Purchaser for defective products must be
in writing within 30 days after Purchaser's receipt of shipment
and in all events before information is disseminated and Purchaser shall
specify the basis of the claim in writing. **SELLER IS FURNISHING BASIC
PRODUCTS AT STANDARD PRICES AND IS NOT INSURING PURCHASER
AGAINST POSSIBLE CONSEQUENCES OF ERROR, OMISSION OR NE-
GLIGENCE IN PRODUCTION OR DELIVERY, EXCEPT FOR BREACH OF THE
EXPRESS WARRANTIES SET FORTH IN PARAGRAPH 8A ABOVE. SELLER
SHALL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGES OR FOR ANY OTHER
OR ANY INTERRELATIONS OF DISSEMINATED INFORMATION OR OTHER
DEFECT REGARDING THE QUALITY, VALUE, OR SIMILARITY FOR ANY
FURNISHING OF ANY PRODUCT SOLD HEREUNDER, WHETHER CAUSED
BY SELLER'S NEGLIGENCE OR OTHERWISE, IT BE EVEN THAT SELLER
BE LIABLE FOR CONSEQUENTIAL SPECIAL OR CONSEQUENTIAL DAMAGES
OR ANY OTHER CLAIM OR DEMAND WHATSOEVER, EXCEPT TO THE
EXTENT OF THE PURCHASE PRICE OF THE PRODUCT, THE RETURN OF
WHICH SHALL BE PURCHASER'S SOLE AND EXCLUSIVE REMEDY HERE-
UNDER. PURCHASER ASSUMES ALL RISK OF LOSS, DAMAGE OR DELAY
HEREIN, OR THE UTILIZATION OF ANY PRODUCT BY SELLER HERE-
UNDER, OR THE UTILIZATION THEREOF, EXCEPT TO THE EXTENT EX-
PRESSLY ABOVE PROVIDED.**

8 In case an allowance for transportation expenditures is made, the required paid receipt bill shall be attached to the return.

Seller shall have no responsibility for under or over claims for his delivery price arising by shortages required by the carrier or by other cause, but only in respect of Seller's shipping point. Any claims by Buyer or by any other party for shortage or damage to carrying price for such delivery shall be made within 30 days after receipt of shipment and acceptance by Buyer. In no situation will claims by carrier relating to claims received by national lines fall in the conditions of sale.

• SPECIAL OR NONSTOCK MATERIALS.

In the case of special or one-time materials, Ponchartré's contribution will not be compared with respect to finished items and items within 10 days of completion and on other items in the process of manufacturing, this amount will be 10 percent of the percentage of completion as applied to the purchase price. When a pre-approved material only is involved, the contribution charge shall be the end of the material plus 10%.

10 MISCELLANEOUS CONDITIONS

A The waiver by Seller of any term, provision or condition herein stated shall not be construed to be in violation of any other term, condition or provision hereof, nor shall such waiver be deemed a waiver of a subsequent breach of the same term, condition or provision, nor shall it be deemed a waiver of any other term, condition or provision hereof.

2. Procedures may not cancel or modify any notice in respect of the privilege of making any changes in specifications except in writing and with the express consent of Seller and subject to such conditions as will ensure Seller has no loss there by by reason thereof. This knowledge constitutes evidence of the sale and is an important factor between Purchaser and Seller and none of the terms and conditions contained herein may be held to be subject to modification or alteration except by a written instrument signed by Seller. There are no oral understandings, agreements or conditions or representations relating to the above which have not been fully expressed herein.

3. The laws of the State of California shall govern the validity interpretation and enforcement of these terms.

1 October 1, 1975 through the year 1976.

2 41. Do you contend that the injuries resulting from the
3 use of the product resulted from contributory negligence of the
4 plaintiffs or third person?

5 ANSWER: Kaiser Cement & Gypsum has no knowledge at the
6 time of injuries resulting from the use of its joint compounds,
7 texture paints, plastic cements, fire-rated mineral fiberboards,
8 any other product. Therefore, at this time, Kaiser Cement &
9 Gypsum makes no contention concerning contributory negligence of
10 any plaintiffs or third persons sustaining injuries resulting from
11 the use of our products.

12 42. If your answer to Interrogatory No. 41 above is in
13 the affirmative, please state:

14 A. Each fact of which you have knowledge that
15 supports this allegation;

16 B. Name and address of each person who has
17 knowledge of facts that support this allegation.

18 ANSWER: Not applicable.

19 43. Do you contend that the injuries resulting from the
20 use of the product resulted from an assumption of risk on the
21 part of the plaintiffs?

22 ANSWER: Kaiser Cement & Gypsum has no knowledge at this
23 time of injuries resulting from the use of joint compounds, tex-
24 ture paints, plastic cements, fire-rated mineral fiberboards, or
25 any other products. Therefore, at this time, Kaiser Cement &
26 Gypsum makes no contention concerning whether any injuries sus-
27 tained by plaintiff or third person resulted from those persons'
28 assumption of the risk in using our products.