FILE NAME: Kaiser Cement (KCEM)

DATE: 1973

DOC#: KCEM011

DOCUMENT DESCRIPTION: Formula for Product made in Seattle, Antioch

DRYWALL ACCESSORY PRODUCTS	FINISHING COMPOUND (POLYMERIC BASE)	BULLETIN NO: J 6[illegible] DATE: 3/[illegible]/[illegible] PAGE: 1 of 2
APPROVALS: [illegible]	PRODUCING PLANT SEATTLE	CANCELS: J 6[illegible] DATE: 5/20/70

BULLETIN	DESCRIPTION	%	POUNDS	[illegible]
220	Whiting	68.63	1400	
251	Mica, WMC P80K	9.80	200	
260	Sericite, Marvon	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 cm cylinder @ 5 sec 250 cm to 150 cc water	38 - 40 cm
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.

[illegible] PRODUCTS	COMPOUND	DATE:	3/26/74
		PAGE:	1 of 3
APPROVALS:	PRODUCING PLANT Antioch	CANCELS:	P-40
		DATE:	9/1/68

BULLETIN	DESCRIPTION	%	POUNDS	CELL
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	.36	7	
430	Sodium Tripolyphosphate (STPP)	.05	1.0	
452	Preservative	.08	2.5	
320	Dibutyl Phthalate (Dry liquid concentrate)	.38	7.5	
332	Potassium Sulphate, K_2SO_4 (98% - 100 mesh)	.76	10 - 15	
417	Sodium Citrate (98% - 100 mesh)	.05	1.0	
220	Whiting	25.74	500	
106	Cao 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.

DRYWALL ACCESSORY PRODUCTS	COMPOUND (POLYMERIC BASE)	DATE: 2/22/72
		PAGE: 1 of 2
APPROVALS:	PRODUCING PLANT DELANCO	CANCELS: J 6418 DATE: 12/22/71

BULLETIN	DESCRIPTION	%	POUNDS	CAL
220	Whiting	60.95	1250	
251	NMC Mica	12.20	250	
260	Sericite (Marvon)	12.20	250	
045	Asbestos 7RF 10	4.88	100	
186	Hydrite Flat D Clay	4.88	100	
166	Hamaco 277	2.44	50	
330	Polyvinyl Alcohol	1.47	30	
244	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 8 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

[illegible] ENTERAL ADHESIVE — PRODUCTS (	[illegible] GENERAL PURPOSE	BULLETIN NO: J [illegible] DATE: 2/1/72 PAGE: 1 of 2
APPROVALS: [illegible]	PRODUCTION PLANT JACKSONVILLE	CANCELS: J 6[illegible] DATE: 9/29/71

BULLETIN	DESCRIPTION	%	POUNDS	[illegible]
220	Whiting	39.72	2560	
256	Vicn 1203	7.79	500	
261	Mica, Marvon CEF 2	6.23	400	
050	Asbestos 7 TF 1	3.89	250	
456	Troysan CAP 100PP	.09	6	
249	Methanol 220	.31	24	
200	Keltone	.16	10	
	Water (starting)	25.99	1668	200
470	PVA Emulsion	6.92	444	49
078	Carbitol Solvent	.47	30	3
	Water (adjust to Standard viscosity)	8.43	[illegible]	65
	TOTAL	100.00	[illegible]	

MANUFACTURING INSTRUCTIONS:

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

QUALITY CONTROL:

TM-1A	Viscosity, Brookfield	340,000 to [illegible] cps
TM-3	Tape Bond	9 - [illegible]
TM-31	Standard Test Viscosity, Brookfield	190,000 - [illegible]

PRODUCT BULLETIN DRYWALL ACCESSORY PRODUCTS	PREMIX JOINTING COMPOUND	BULLETIN NO: J-020D DATE: 11-20-74 PAGE: 1 of 2
APPROVALS:	PRODUCING PLANT: JACKSONVILLE	CANCELS: J-020C DATE: 5-16-73

BULLETIN RM-J	DESCRIPTION	%	POUNDS	GALLONS
221	Whiting	61.60	4000	
047	Asbestos CC 210	.92	60	
442	Tale, Mistral 200	1.54	100	
036	Celite 434	1.54	100	
245	Thickener W/C 226	.25	16	
200	Water	.08	5	
330	PV Alcohol	.16	10	
493	Dri 10 SWP	.06	4	
470	PVA Emulsion 4.40% on solids	5.11	332	46
	Water	26.09	1700	210 ~~
284	Oleic Acid	.37	24	
450	Triethanolamine	.19	12	
267	Odorless Mineral Spirits	1.23	80	12.5
191	Red Oxide Color		0.28	4.0
	TOTAL	100.00	6491.28	

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 cm cylinder @ 5 sec.	14 to 16 cm
TM-6	Application	Equal to Standard
TM-7	Workability	Equal to Standard

PRODUCT BULLETIN INTERIOR 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	%	POUNDS	GALLO
220	Whiting	66.43	1350	
442	Talc (Nytal 220)	19.68	400	
045	Asbestos 7RF10	4.92	100	
446	Titanium Pigment	2.46	50	
096	Clay Wyomel	1.23	25	
436	Starch	2.46	50	
084	Casein	1.23	25	
102	Diammonium Phosphate	0.10	2	
022	Ammonium Biborate	0.10	2	
456	RM-10-SRP	0.35	7	
454	Nopco PD-1	0.15	3	
200	Keltose	0.30	6	
245	Methocel 228	0.30	6	
164	Glyoxal 80%	0.49	10	
	TOTAL	100.00	2032	

MANUFACTURING INSTRUCTIONS:

Mixing time shall be 8 minutes minimum and 12 minutes maximum.

QUALITY CONTROL:

TM-1	Viscosity, Brookfield spindle "A" @ 5 RPM, 260 gm/300 cc water	30,000-35,000 cps
TM-3A	Bond	Equal to Standard
TM-34	Hardness	Equal to Standard

PRODUCTS	QUALITY FEATURES	DATE: 3/20/74
APPROVALS:	PRODUCING PLANT ANTIOCH	PAGE: 1 of 2
		CANCELS: J-5506
		DATE: 5/16/73

BULLETIN	DESCRIPTION	%	POUNDS	
442	Talc, Westal 202	31.18	300	
221	Limestone	31.18	300	
446	Titanium Pigment	2.60	25	
056	Wyojel 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	
186	Hydrated Lime	.05	0.5	
245	Methocel 228	.31	3.0	
074	Burnt Umber	---	(1 oz.)	
282	Percel Kasma	---	(1 oz.)	
322	Styrene Aggregate	2.60	25	150
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:

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

QUALITY CONTROL:

TM-1B - Viscosity, cc per 100 gm to give 5 - 5-1/2" diameter patty. 110 to 190 cc

TM-3A - Bond Equal to Stand

PERMANENTE CEMENT COMPANY

PLANT: Permanente

Product Specification

No. Pl.G-

Standard Product: Plastic Gun Cement

Effective Date: 1 August, 196

Special Product:

Supercedes No. Pl.G-2

FORMULATION(1)	Acceptance Limits (2) Minimum	Acceptance Limits (2) Maximum	Control Values Minimum	Control Values Standard	Control Values Maxim
3.0% Lincoln Clay 0.1% R.D.A. 0.1% Airalon 3.0 to 5.0% Asbestos Fiber 3.75% Gypsum 11.0% Approximate Remainder Type I, II, IIIA, V clinker	(Crescent Grd	Asb. Bond G-0-X)			
SO_3, %	1.20	2.50	1.55	1.75	1.9
Loss on Ignition, %		3.0		1.80	2.1
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% $CaCl_2$ may be added in winter months.

(2) All limits set by PCC.

(3) Typical only (with asbestos).

Originated By:

Process Engr. Dept. 8/8/63 Date

Approved By:

Tech. Director 8/9/63 Date

Mgr., Proc. Engr. 8/9/63 Date

Authorized By:

Vice President in Charge of Operations

Date: 8/13/63

Ronson: L.O.I. increase due to combined water in asbestos

Form 665 (11/62)

PERMANENTE CEMENT COMPANY

PLANT: Permanente — Product Specification — No. Pl.

Standard Product: Plastic and Plasti-Spred Cement — Effective Date: 1 August, 19

Special Product: _____ — Supercedes No. Pl.-3

	Acceptance Limits (2)		Control Values		
FORMULATION(1)	Minimum	Maximum	Minimum	Standard	Max
3.0% Lincoln Clay 0.1% R.D.A. 0.1% Airalon 3.0 to 5.0% Asbestos Fines 3.75% Gypsum 11.0% Approximate Remainder Type I, II, IIIA, V clinker	All Portland Cement Superceded 9/1/63				
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.(
Compressive Strength, psi.					
1 Day	650		700	850	100(

NOTES: (1) 0.25% $CaCl_2$ 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: L.O.I. increase due to combined water in asbestos	Mgr., Proc. Engr. 8/9/63 Date	Date: 8/13/63

Form 665 (11/62)

BOARD BULLETIN
INSULATION PRODUCTS
ST. HELENS, OREGON

APPROVALS

MINERAL
FIBERBOARD
UL FIRE RATED

BULLETIN NO: B-13
DATE: 6/1/
PAGE: 1 of

CANCELS: B-10
DATE: 6/62

	Tile 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-.7
Planed Thickness, Inches	.525-.530	.690-.6
Calender Thickness, Inches		
Individual	.490-.500	.615-.6
Tape Measure, 10 pieces	4-7/8 - 5	6-3/16 - 6-1/4
Weight, Headrig, Lbs/MSF	1210	1429
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: B-4 DATE: 1/29/62 PAGE: 1 of 2 CANCELS: B-4 DATE: 10/20/60

PRODUCT SPECIFICATIONS: (Refer to Product Bulletin B-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)	± 0.10 from average
*Edge Hardness or Take-off (lbs.)	8.0 minimum
End Peel after Sawing (inch)	1/8 maximum
Flexural Strength, minimum	
Across grain (lbs.)	150
Parallel "	45
Deflection at Break, minimum	
Across grain (inch)	0.25
Parallel "	0.15
Punch Test (lbs.)	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	1/2" NULL-A-FIRE TYPE X

*Denotes additional charge.

PRODUCT BULLETIN GYPSUM PRODUCTS	GYPSUM WALLBOARD 5/8" NULL-A-FIRE (UL) * TYPE X	BULLETIN NO: B-6 DATE: 4/29/ PAGE: 1 of 3 CANCELS: B-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)	1900 - 2150 (Rosario - 1960 - 2175)	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)	0.3 - 1.5 (Rosario - 0.6 - 2.0)	2.0 - 3.5
Lignin	(B-G-1)	0 - 4.0	0 - 4.0
Ground Gypsum	(B-G-1)	60.0 maximum (Rosario - None)	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.