KAYLO-10 and KAYLO-20 PIPE INSULATION

Packaging Data

LINEAL FEET PER CARTON *
LOAD FACTORS

* Does not apply to Kaylo-Klad

375030

PLAINTIFF'S
EXHIBIT
K-1738

KAYLO-10 and KAYLO-20 PIPE INSULATION

PACKAGING DATA....LOAD FACTORS

Serviced from Berlin, N.J.

IRON PIPE SIZES (IPS)																	
		SINGLE LAYER THICKNESSES															
		1"			1-1/2"			2"			2-1/2"			3"			
NOMINAL PIPE SIZE	O.D. of PIPE	LF /C	Load Factor CL	TL	LF /C	Load Factor CL	TL	LF /C	Load Factor CL	TL	LF /C	Load Factor CL	TL	LF /C	Load Factor CL	TL
1/2"	.84	90	.19	.29	75	.29	.43	48	.29	.43	27	.29	.43	18	.26	.38
3/4"	1.05	90	.19	.29	75	.29	.43	48	.29	.43	27	.29	.43	18	.26	.38
1"	1.32	90	.26	.38	60	.29	.43	36	.29	.43	27	.29	.43	18	.26	.38
1-1/4"	1.66	90	.26	.38	48	.29	.43	36	.29	.43	27	.29	.43	18	.29	.38
1-1/2"	1.90	75	.29	.43	48	.29	.43	27	.29	.43	18	.26	.38	12	.21	.31
2"	2.38	60	.29	.43	36	.29	.43	27	.29	.43	18	.26	.38	12	.21	.31
2-1/2"	2.88	48	.29	.43	27	.29	.43	18	.26	.38	12	.21	.31	12	.29	.43
3"	3.50	36	.29	.43	27	.29	.43	18	.26	.38	12	.21	.31	12	.29	.43
3-1/2"	4.00	27	.29	.43	18	.26	.38	12	.21	.31	12	.29	.43	6	.16	.23
4"	4.50	27	.29	.43	18	.26	.38	12	.21	.31	12	.29	.43	6	.16	.23
4-1/2"	5.00	18	.26	.38	12	.21	.31	12	.29	.43	6	.16	.23	6	.16	.32
5"	5.56	18	.26	.38	12	.21	.31	12	.29	.43	6	.16	.23	6	.16	.32
6"	6.63	12	.21	.31	12	.29	.43	6	.16	.23	6	.16	.32	6	.22	.35
7"	7.63				6	.16	.23	6	.16	.32	6	.22	.35	6	.26	.42
8"	8.63				6	.16	.32	6	.22	.35	6	.26	.42	3	.16	.26
9"	9.63				6	.22	.35	6	.26	.42	3	.16	.26	3	.19	.29
10"	10.76				6	.26	.42	3	.16	.26	3	.19	.29	3*	.21	.31
11"	11.76				3	.16	.26	3	.19	.29	3*	.21	.31	3*	.26	.40
12"	12.75				3	.19	.29	3*	.26	.40	3*	.26	.40	3*	.26	.42
14"	14.00				3*	.26	.40	3*	.26	.42	3*	.26	.42	3*	.29	.43
15"	15.00				3*	.26	.42	3*	.29	.43	3*	.29	.43	3*	.30	.46
16"	16.00				3*	.29	.43	3*	.30	.46	3*	.30	.46	3*	.40	.62
17"	17.00				3*	.30	.46	3*	.40	.62	3*	.40	.62	3*	.42	.83
18"	18.00				3*	.40	.62	3*	.42	.83	3*	.42	.83	3*	.44	.88
19"	19.00				3*	.42	.83	3*	.44	.88	3*	.44	.88	3*	.46	.93
20"	20.00				6	.38	.56	3*	.46	.93	3*	.46	.93	3*	.46	.98
21"	21.00				6	.29	.43	3*	.46	.98	3*	.46	.98	3*	.69	1.04
22"	22.00				6	.29	.43	3*	.65	.98	3*	.65	.98	3*	.69	1.04
23"	23.00				6	.29	.43	3*	.69	1.04	3*	.69	1.04	3*	.69	1.04
24"	24.00				6	.29	.43	3*	.69	1.04	3*	.69	1.04	3*	.74	1.11
25"	25.00				7.05	.28	.42	4.95	.29	.42	3.96	.28	.42	3.38	.28	.42
26"	26.00				6.75	28	42	4.84	28	.42	3.78	.28	.42	3.28	.28	.42
27"	27.00				6.60	.28	.42	4.62	.28	.42	3.69	.28	.42	3.30	.28	.42
28"	28.00				6.30	.28	.42	4.51	.28	.42	3.51	.28	.42	3.04	.28	.42

*Also available in TRI and QUAD Form. Consult CSC for Load factors and LF/C.

37503-A

IRON PIPE SIZES (IPS)																	
		SINGLE LAYER THICKNESSES															
		1"			1-1/2"			2"			2-1/2"			3"			
NOMINAL PIPE SIZE	O.D. of PIPE	LF /C	Load Factor CL	TL	LF /C	Load Factor CL	TL	LF /C	Load Factor CL	TL	LF /C	Load Factor CL	TL	LF /C	Load Factor CL	TL
29"	29.00				6.15	.28	.42	4.40	.28	.42	3.42	.28	.42	3.00	.28	.42
30"	30.00				5.06	.28	.38	3.68	.26	.38	3.01	.26	.38	2.62	.26	.38
31"	31.00				4.84	.26	.38	3.67	.26	.38	2.84	.26	.38	2.40	.26	.38
32"	32.00				4.73	.26	.38	3.78	.26	.38	2.80	.26	.38	2.34	.26	.38
33"	33.00				4.62	.26	.38	3.60	.26	.38	2.73	.26	.38	2.28	.26	.38
34"	34.00				4.80	.26	.38	3.61	.26	.38	2.66	.26	.38	2.25	.26	.38
35"	35.00				4.95	.29	.43	3.96	.29	.43	2.94	.29	.43	2.48	.29	.43
36"	36.00				4.73	.29	.43	3.78	.29	.43	2.87	.29	.43	2.40	.29	.43
37"	37.00				4.62	.29	.43	3.69	.29	.43	2.80	.29	.43	2.34	.29	.43
38"	38.00				4.51	.29	.43	3.60	.29	.43	2.73	.29	.43	2.28	.29	.43
39"	39.00				4.40	.29	.43	3.51	.29	.43	2.66	.29	.43	2.76		

O.D. of Tube	Nom. Tube Size	COPPER TUBING (CT)					
1/2"	3/8"	90	.19	.29	90	.26	.38
5/8"	1/2"	90	.19	.29	90	.26	.38
3/4"	5/8"	90	.19	.29	90	.29	.43
7/8"	3/4"	90	.19	.29	76	.29	.43
1-1/8"	1"	90	.26	.38	76	.29	.43
1-3/8"	1-1/4"	90	.26	.38	60	.29	.43
1-5/8"	1-1/2"	76	.29	.43	60	.29	.43
2-1/8"	2"	76	.29	.43	48	.29	.43
2-5/8"	2-1/2"	60	.29	.43	36	.29	.43
3-1/8"	3"	48	.29	.43	27	.29	.43

LF/C Indicates Lineal Feet per Carton.

LOAD FACTORS indicate the % of a standard, 40' CL or TL occupied by one Carton of each item.

To Convert into % of CL or TL for item ordered, multiply factor times number of cartons of the item.

Load Factors are for Standard 40' Rail Cars and 40' Trucks. Consult Customer Service Center for factors for other vehicle sizes.

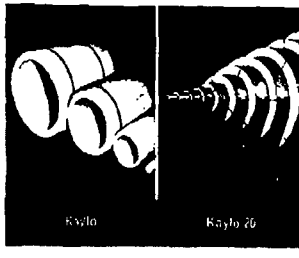
37503-A

KAYLO BLOCK

AP 700 BOARD

OWENS CORNING
FIBERGLAS

Pipe Insulation



Kaylo & Kaylo 20 Pipe Insulations

rigid hydrous calcium silicate pipe insulations for heated piping up to 1800F.

uses

Standard Kaylo is recommended for use on heated piping operating up to 1200F and Kaylo 20 extends the temperature range to 1800F. These thoroughly field-tested insulations have the physical properties most desirable for efficient, durable work for indoor and outdoor, power and process piping. A variety of jackets are available for surface finish and weatherproofing.

description

Kaylo® & Kaylo 20® pipe insulations are rigid hydrous calcium silicate heat insulations for use on all heated piping up to 1800F—indoors and out. These products are precision molded in sections or segments from a chemically reacted material. A small amount of asbestos fiber is added to improve mechanical strength. Kaylo is white. Kaylo 20 has a slight pinkish color to distinguish it from Kaylo.

benefits

lower operating costs — Kaylo insulations have exceptional thermal efficiency. The low k factor of .40 at 200 mean temperature means lower operating cost, better temperature control for process operations.

rugged — Kaylo Pipe Insulations are strong and rigid to resist mechanical abuse in shipping, handling and in service.

versatile — Kaylo's extended temperature range covers a broad number of uses with one material. All heated piping requirements to 1800F and in sizes from ½" to 36" IPS can be met with Kaylo and Kaylo 20.

will not cause stress corrosion cracking — Kaylo will not cause stress corrosion cracking of stainless steel because Kaylo contains an inhibitor, and has less than 250 ppm soluble chlorides.

unaffected by moisture — Kaylo can be completely saturated in water without appreciable loss of strength and regains its strength and thermal value after drying out.

clean, neat installation — Kaylo cuts cleanly leaving a sharp square edge for neater appearance on fittings. Rigid manufacturing tolerances assure uniform, smooth, unbroken joints.

variety of jackets — A variety of factory-applied jackets allows a selection of product for indoor finished appearance or for weatherproofing insulation on outdoor lines.

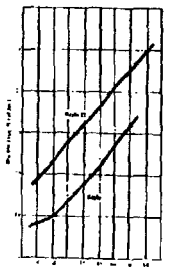
nesting sizes — Kaylo and Kaylo 20 Pipe Insulations are manufactured to Simplified Dimensional Standards to permit nesting sizes for double layer applications.

®Kaylo is a registered trademark (Reg. U.S. Pat. Off.) of Owens-Corning Fiberglas Corp.

performance characteristics

	Kaylo	Kaylo 20
density (approx.)	11 lb. pcf.	12 lb. pcf.
flexural strength (ASTM C-446)	75 lbs./sq. in.	90 lbs./sq. in.
compressive strength (ASTM C-165) at 5% deformation	125 psi	130 psi
resistance to abrasion (Conventional tumbling test-loss in weight before heating)	after 10 minutes, 20%	after 20 minutes, 40%
alkalinity	ph 10	ph 10
corrosion resistance	does not cause or accelerate corrosion of steel, aluminum, or stainless steel	
Specific heat	0.22 btu/lb. F	
dimensional stability linear shrinkage after heating for 24 hours in a muffle		
% length loss	1.6 (at 1200°F)	2.5 (at 1800°F)

thermal conductivity



sizes

thickness—Kaylo Pipe Insulation is available in single or double layer thicknesses from 1" to 3" depending upon pipe size. Kaylo Tube Insulation is available in single layer thicknesses of 1" and 1½".

pipe sizes—Kaylo Pipe Insulation is available to fit nominal pipe sizes from ¼" to 18" in diameter. Kaylo Tube Insulation will fit nominal copper tubing sizes from ⅜" to 3" in diameter.

forms—Kaylo Pipe Insulation is available in sectional or multisegmental form depending upon pipe size. All insulation is furnished in 3 ft. sections.

jackets

canvas—Standard canvas 6 & 8 oz. canvas jacket are available for all types, sizes and thicknesses of Kaylo Pipe and Tube Insulation at an additional charge. These jackets are factory applied on Sectional Pipe and Tube Insulation. On Multisegmental forms, they are furnished but not adhered. Bands are available for use with this product at slight additional charge and will be furnished on request.

Kaylo Klad—Kaylo is also available with an embossed aluminum jacket .016" thick or .010" thick stainless steel jacket. These jackets provide greater resistance to mechanical damage and present a neat brushed appearance to pipe lines. The longitudinal seam has a self-locking joint. Butt sealing strips with integral mastic and protective asbestos cover are furnished for sealing end joints.

specification compliance

HH-I-523c—Insulation Block and Pipe Covering, Thermal (Calcium Silicate for Temperatures up to 1200F). Type II, Class A through F.

MIL-I-2781D (Ms. Amend. 1)—Insulation, Pipe Covering, Thermal: Grade I, Class b; Grade II, Class d; Grade III, Class e, Type I and II.

MIL-I-24264 (Ships)—Insulation Materials, Thermal, with Special Corrosion and Chloride Requirements, Type IA, IC, ID, IE.

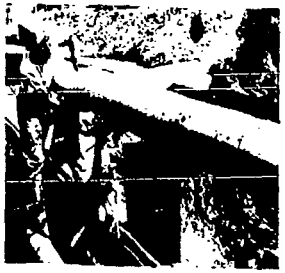
ASTM C533-67.

application recommendations

outdoor lines—Kaylo Pipe Insulations are mechanically fastened by wiring in place using 16 gauge wire on 9" centers and subsequently covered with a weatherproof jacket of metal or 45 lb roofing felt. See Application Specifications for complete details.

indoor lines—Kaylo for indoor piping work is furnished with a factory-applied canvas jacket and held in place with bands or wire. The jacket has overlapping joint flaps that are smoothly pasted in place. Canvas should be used to provide a base for painting.

fittings—Fitting are insulated with mitered segments of Kaylo wired in place and finished with a ¼" layer of insulating cement. Flanges and valves are insulated with oversized pipe insulation. They are finished off with canvas pasted in place for indoor lines or reinforced waterproof mastic for outdoor lines.



economic thickness

Selection of insulation thicknesses for any specific application should take into consideration the following important criteria. 1. Cost of insulation applied. 2. Cost of heat energy. 3. Cost of capital. 4. Cost of depreciation—plant and insulation. 5. Capital investment in heat production equipment. 6. Temperature differential. 7. Size of the pipe or surface. 8. Conductivity of insulation.

for hot piping, the tabulated thicknesses are optimum thicknesses calculated on an "Economic"* basis for heat conservation under average operating conditions and assures adequate temperature control. Special conditions may warrant the use of other thicknesses.

*From "How to Determine Economic Thickness of Insulation"—National Insulation Manufacturers Association.

economic thickness*—Kaylo pipe insulation—process piping (80F ambient still air)

PIPE TEMP.	200			400			600			800			1000			1200		
TEMP. DIFF.	120			320			520			720			920			1120		
IPS	ET	HL	ST	ET	HL	ST	ET	HL	ST	ET	HL	ST	ET	HL	ST	ET	HL	ST
¼	1	18	95	1	51	122	1	89	152	1	132	187	1	182	228	1½	202	198
⅜	1	22	98	1	61	129	2	106	165	1	157	207	1	215	254	1½	232	205
1	1	23	95	1	64	123	1	111	156	1	165	200	1½	191	179	1½	252	211
1¼	1	29	99	1	81	143	1	140	179	1	207	218	1½	213	179	1½	281	211
1½	1	29	97	1	82	128	1	143	163	1½	173	181	1½	239	192	1½	315	227
2	1	34	98	1	95	130	1	167	165	1½	198	183	1½	273	194	2	388	188
2½	1	39	98	1	108	131	1½	135	128	1½	203	153	2	307	165	2	326	179
3	1	47	100	1	131	135	1½	174	141	1½	260	171	2	304	173	2½	355	176
3½	1	44	95	1	123	123	1½	175	133	1½	261	159	2	321	164	2½	366	168
4	1	55	99	1	155	134	1½	209	144	2	262	158	2	383	177	2½	418	188
4½	1	53	98	1	147	125	1½	206	135	2	262	143	2	353	168	2½	419	171
5	1	67	100	1	188	137	1½	250	147	2	308	154	2	426	183	2½	481	186
6	1	81	102	1½	171	121	1½	298	152	2	355	157	2	489	186	2½	558	190
7	1½	66	94	1½	187	120	1½	324	150	2	395	153	2½	467	165	2½	617	192
8	1½	73	95	1½	207	121	1½	358	151	2	434	159	2½	497	162	3	583	179
9	1½	80	95	1½	225	121	1½	391	151	2	454	155	2½	541	164	3	631	171
10	1½	85	94	1½	240	120	2	341	133	2½	433	143	2½	568	167	3½	633	162
11	1½	93	94	1½	262	121	2	368	133	2½	474	145	2½	656	170	3½	682	164
12	1½	99	94	1½	279	120	2	401	135	2½	507	146	2½	701	171	3½	727	165
14	1½	117	96	1½	333	125	2	456	139	2½	570	150	2½	787	177	3½	804	169
15	1½	134	96	1½	377	128	2	517	140	2½	643	150	2½	858	179	3½	901	171
18	1½	149	97	1½	419	128	2	574	144	2½	712	152	3	949	182	3½	993	173
20	1½	164	97	1½	462	127	2	630	141	2½	781	153	3	939	183	3½	1035	174
24	1½	194	97	1½	546	127	2	744	142	2½	929	154	3	1098	185	3½	1270	176

economic thickness—Kaylo pipe insulation—power & utility piping (80F ambient still air)

PIPE TEMP.	200			400			600			800			1000			1200		
TEMP. DIFF.	120			320			520			720			920			1120		
IPS	ET	HL	ST	ET	HL	ST	ET	HL	ST	ET	HL	ST	ET	HL	ST	ET	HL	ST
¼	1	18	95	1	51	122	1½	74	123	1½	111	143	2	138	144	2½	161	136
½	1	22	98	1	61	129	1½	85	130	2	112	132	2	156	153	2½	179	143
1	1	23	95	1	64	123	1½	90	120	2	122	118	2½	152	133	3	188	137
1¼	1	29	99	1	81	134	1½	103	128	2	143	140	2½	176	142	3	215	145
1½	1	29	97	1	82	128	1½	116	134	2½	128	119	2½	177	134	3	217	128
2	1	34	98	1½	78	112	1½	133	126	2½	151	126	2½	209	144	3	254	148
2½	1	39	98	1½	78	107	2	119	114	2½	161	125	3	205	129	3½	251	134
3	1	47	100	1½	100	115	2	147	125	2½	194	132	3	243	139	3½	293	143
3½	1	44	95	1½	101	111	2	151	121	3	180	119	3½	231	126	4	286	132
4	1	55	99	1½	123	117	2½	153	117	3	203	124	3½	257	131	4	316	137
4½	1	52	98	1½	118	112	2½	153	113	3	207	121	3½	264	128	4	321	133
5	1	67	100	1½	144	119	2½	176	118	3	235	126	3½	296	134	4	356	139
6	1	81	102	2	137	110	2½	205	120	3	270	129	3½	331	135	4½	356	129
7	1½	66	94	2	152	110	2½	226	121	3	291	128	3½	357	137	4½	416	137
8	1½	73	95	2	167	110	2½	241	120	3½	290	122	4	368	139	4½	452	139
9	1½	80	95	2	175	109	2½	262	121	3½	314	123	4	398	132	5	456	133
10	1½	85	94	2	196	110	3	258	115	3½	346	125	4	437	134	5	497	135
11	1½	93	94	2	212	111	3	278	116	3½	372	126	4	469	135	5	532	136
12	1½	99	94	2	233	112	3	297	116	4	388	120	4½	459	129	5	565	137
14	1½	117	96	2½	219	107	3	331	119	4	397	122	4½	503	131	5½	575	134
16	1½	134	96	2½	248	107	3	372	119	4	443	123	4½	564	132	5½	643	135
18	1½	149	97	2½	274	108	3	411	120	4	488	124	4½	617	133	5½	703	137
20	1½	164	97	2½	301	108	3	450	120	4	533	124	4½	672	134	6½	764	137
24	1½	194	97	2½	354	108	3½	484	115	4½	565	120	5	719	128	6	824	133

table key (ambient still air at 80F) ET—economic thickness HL—heat loss...Btu/hr/lineal foot
*calculated ST—surface temperature

375036

375037

economic thickness—Kayle 20 pipe insulation—power & utility piping (80F ambient still air)

Temp.	1300			1400			1500			1600			1700			1800		
Pipe Size	ET	HL	ST	ET	HL	ST	ET	HL	ST	ET	HL	ST	ET	HL	ST	ET	HL	ST
½	2½	221	152	2½	245	160	3	254	150	3	278	157	3	304	164	3½	313	156
¾	2½	243	156	3	252	148	3	278	155	3	305	162	3½	314	154	3½	342	161
1	2½	259	161	3	277	152	3	306	160	3½	316	152	3½	345	159	3½	375	166
1¼	3	279	149	3	310	157	3	342	165	3½	351	157	3½	384	164	3½	417	172
1½	3	284	153	3½	309	146	3½	362	160	3½	368	160	4	397	160	4	434	168
2	3	337	156	3½	347	150	3½	383	158	3½	421	165	4	432	159	4	469	166
2½	3	374	160	3½	385	154	3½	425	162	3½	466	170	4	476	163	4	518	171
3	3½	388	150	4	402	146	4	443	153	4½	458	150	4½	500	156	4½	545	163
3½	4	398	142	4	434	149	4	479	156	4½	494	152	4½	539	159	5	555	155
4	4	419	144	4	465	151	4½	481	148	4½	528	154	5	545	151	5	593	158
4½	4	446	145	4½	464	143	4½	512	150	5	530	147	5	579	153	5½	598	151
5	4½	445	138	4½	495	145	5	515	143	5	565	149	5½	585	147	5½	637	153
6	4½	502	141	5	523	140	5	578	146	5½	560	144	5½	655	150	6	678	149
7	4½	550	143	5	572	147	5	632	148	5½	695	147	6	679	146	6	738	151
8	5	560	137	5	622	143	5½	647	142	5½	710	149	6	735	148	6½	761	147
9	5	603	138	5½	630	138	5½	696	144	6	722	143	6	789	149	6½	817	149
10	5	653	140	5½	681	139	5½	752	146	6	779	145	6½	809	145	6½	888	150
11	5½	657	134	5½	724	140	6	754	140	6	829	146	6½	859	146	7	893	146
12	5½	693	135	5½	770	141	6	801	141	6½	834	141	6½	911	147	7	943	147
14	5½	742	136	6	776	137	6	857	143	6½	891	143	7	926	143	7	1007	148
16	6	772	132	6	858	138	6½	896	139	7	934	139	7	1020	144	7½	1058	145
18	6	834	133	6½	866	134	6½	978	140	7	1011	140	7½	1059	141	7½	1151	146
20	6	917	134	6½	960	135	6½	1060	141	7	1102	142	7½	1146	142	7½	1247	148
24	6	1060	136	6½	1108	137	7	1157	138	7½	1206	139	7½	1318	144	8	1356	145
30	6½	1195	133	7	1253	134	7½	1312	135	7½	1440	141	8	1497	142	8½	1555	143
36	6½	1620	142	7	1690	144	7½	1790	147	7½	1950	153	8	2060	155	8½	2150	158

ET—economic thickness HL—heat loss . . . Btu/hr/lineal foot ST—surface temperature

OWENS-CORNING FIBERGLAS

OWENS-CORNING FIBERGLAS CORPORATION

Industrial and Commercial Construction Materials Division, 717 Fifth Avenue, New York, New York 10022
General Offices, Toledo, Ohio 43601

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37503

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FIBERGLAS

prices

KAYLO-10 AND KAYLO-20 BLOCK INSULATION

LIST PRICES
ZONES 1, 2, 3, & 4

No. IN1.P15
Page 1 of 1
Date July 17, 1972
Supersedes 6/26/72

KAYLO-10 BLOCK INSULATION is an off-white, rigid, hydrous calcium silicate material designed for use as insulation on high temperature vessels and equipment up to 1200° F. For use on stainless steel pipe, orders must refer to the appropriate stainless steel specification requirement.

KAYLO-20 BLOCK INSULATION is pink, rigid, hydrous calcium silicate for temperatures up to 1800° F.

Standard items are shown in Red.
Made-To-Order items are shown in Black.

THICKNESS	LIST* PRICE PER SQUARE FOOT 18" and 36" Lengths
1"	$ .30
1-1/4"	.38
1-1/2"	.45
2"	.60
2-1/2"	.75
3"	.90
3-1/2"	1.05
4"	1.20

* For Discounts see Discount Sheet IN1.D4 (for Zones 1 & 2) or IN1.D4-P (for Zones 3 & 4).

CAS: IN-G11, IN-G80,

CAT: IN26 - Kaylo-10 Block
IN29 - Kaylo-20 Block

	PIECES PER CARTON								SQ. FT. / CARTON			LBS./CARTON			LOAD FACTORS	
	18" Long				36" Long				3'&5"	12"	18"	3'&5"	12"	18"		
THICKNESS	2x18	6x18	12x18	18x18	2x36	6x36	12x36	18x36	Wide	Wide	Wide	Wide	Wide	Wide	CL	TL
1"	144	72	36	24	72	36	18	12	54	54	54	68	88	88	.18	.23
1-1/4"	120	60	30	20	60	30	15	10	45	45	45	68	68	68	.18	.23
1-1/2"	96	48	24	16	48	24	12	8	36	36	36	68	68	68	.18	.23
2"	72	36	18	12	36	18	9	6	27	27	27	68	68	68	.18	.23
2-1/2"	60	30	14	10	30	15	7	5	22.5	21	22.5	61	67	61	.18	.23
3"	48	24	12	8	24	12	6	4	18	18	18	68	88	88	.18	.23
3-1/2"	40	20	10	6	20	10	5	3	15	15	13.5	88	88	91	.18	.23
4"	36	18	8	6	18	9	4	3	13.5	12	13.5	68	52	88	.18	.23

MINIMUM RELEASE QUANTITY:

One carton of any one item in a Full CL or TL of Kaylo Products.

On customer request for LTL quantities, shipments will be billed at the CL price plus all transportation charges. Releases must be at least $600 Net value of Kaylo Products.

Jobsite Only

Releases in excess of one full carload or truckload do not require a variable item and the excess will be shipped seller's routing and invoiced at the same level as the full vehicle.

TRUCKLOAD SHIPMENTS are available in Zones 1 and 2 only.

MIXED CARLOADS: (Zones 1 & 2 only). Carload orders will be accepted for Barrington Mechanical and Architectural Products provided Kaylo portion is a minimum of 1/3-carload.

FOR DISCOUNTS SEE DISCOUNT SHEET IN1.D4 for Zones 1 & 2 or IN1.D4-P for Zones 3 & 4.

General Terms and Conditions of Sale apply to these products and are set forth on GLI 1
SHIPPING TERMS: F.O.B. shipping point, freight allowed on seller's routing. Additional transportation charges are extra
PAYMENT TERMS: 1%, 10th Prox., in dollar amount shown on invoice, Net 30th Prox.

375030

"Trademark Registered Owner: Corning Fiberglas Corporation

AF 700 BOARD

FIBERGLAS

prices

KAYLO BEVELED LAGS

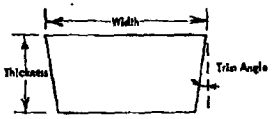
List Prices

ZONES 1, 2, 3, & 4

No.	IN1.P6
Page	1 of 8
Date Effective	June 26, 1972
Supersedes	3/1/72

KAYLO BEVELED LAGS are an off-white, rigid, hydrous calcium silicate material beveled as illustrated to permit use as insertion on large sizes of heated piping up to 1200° F. For use on stainless steel pipe, order must reference the appropriate stainless steel specification requirement.

ALL ITEMS ARE MADE-TO-ORDER



MINIMUM RELEASE QUANTITY:

One carton of any one item in a Full CL or TL of Kaylo Products.

On customer request for LTL quantities, shipments will be billed at the CL price plus all transportation charges. Releases must be at least $300 Net value of Kaylo Products.

Jobsite Only

Releases in excess of one full carload or truckload do not require a variable item and the excess will be shipped seller's routing and invoiced at the same level as the full vehicle.

TRUCKLOAD SHIPMENTS are available in Zones 1 and 2 only

MIXED CARLOADS: (Zones 1 & 2 only). Carload orders will be accepted for Barrington Mechanical and Architectural products provided Kaylo portion is a minimum of 1/3-carload.

FOR DISCOUNTS SEE DISCOUNT SHEET IN1.D4 for Zones 1 & 2 or IN1.D4-P for Zones 3 & 4.

375040

KAYLO BEVELED LAGS

Nominal Pipe Size (Inches)	Thickness (Inches)	LIST PRICES per Lineal Foot	PRODUCT AND PACKAGING DATA: Trim Angle (Degrees)	Sq. Ft. of Block per Lineal Foot	No. Lags Per Carton	Lineal Feet per Carton	Reciprocal of Lineal Feet per Carton	Weight per Carton (pounds)
18	1-1/2	$2.60	9	5.561	48	8.859	.1458	53
	2	3.00	9	5.906	36	6.891	.2036	51
	2-1/2	4.40	8	6.231	30	5.911	.2566	52
	3	5.60	8	6.350	24	3.839	.3395	50
	3-1/2	6.75	8	6.750	20	2.500	.4000	52
	4	7.85	8	6.874	18	2.250	.4444	54
19	1-1/2	2.75	8	5.748	48	8.540	.1527	52
	2	3.80	8	6.170	36	6.404	.2130	51
	2-1/2	4.80	8	6.500	30	5.250	.2966	52
	3	5.80	8	6.624	24	3.008	.3003	50
	3-1/2	7.00	8	7.008	20	2.431	.4765	52
	4	8.15	8	7.158	18	2.161	.4627	54
20	1-1/2	2.85	8	6.007	48	6.258	.1597	53
	2	4.00	8	6.384	36	6.500	.2222	52
	2-1/2	5.00	8	6.768	30	3.691	.2777	52
	3	6.00	8	6.897	24	2.881	.3471	50
	3 1/2	7.25	8	7.135	20	2.306	.4337	52
	4	8.45	8	7.450	18	2.076	.4817	54
21	1-1/2	3.00	8	6.265	48	6.000	.1666	53
	2	4.15	8	6.647	36	4.321	.2284	52
	2-1/2	5.20	8	7.044	30	3.460	.2890	52
	3	6.25	7	7.077	24	2.748	.3637	51
	3-1/2	7.50	7	7.452	20	2.337	.4300	53
	4	8.75	7	7.593	18	2.600	.5000	55
22	1-1/2	3.10	7	6.738	48	5.536	.1806	53
	2	4.30	7	6.851	36	4.157	.2403	52
	2-1/2	5.40	7	7.278	30	3.333	.3000	53
	3	6.50	7	7.548	24	2.666	.3750	51
	3-1/2	7.80	7	7.725	20	2.143	.4666	53
	4	9.10	7	7.892	18	1.929	.5181	55
23	1-1/2	3.20	7	6.994	48	5.333	.1875	53
	2	4.40	7	7.111	36	4.000	.2500	52
	2-1/2	5.50	7	7.493	30	3.215	.3110	53
	3	6.75	7	7.617	24	2.527	.3868	54
	3 1/2	8.05	7	8.007	20	2.068	.4836	53
	4	9.40	7	8.159	18	1.861	.5373	56
24	1-1/2	3.40	7	7.251	48	5.166	.1944	53
	2	4.60	7	7.372	36	3.858	.2592	52
	2-1/2	5.75	7	7.766	30	3.102	.3223	53
	3	7.00	7	7.895	24	2.481	.4030	51
	3-1/2	8.30	7	8.280	20	2.000	.5000	53
	4	9.65	7	8.438	18	1.800	.5556	55
25	1-1/2	4.35	7	7.515	48	4.963	.2014	53
	2	4.85	7	7.642	36	3.772	.2668	52
	2 1/2	6.20	7	9.038	30	3.000	.3333	53
	3	7.50	6	8.312	24	2.325	.4301	52
	3-1/2	8.90	6	8.432	20	1.936	.5165	54
	4	10.30	6	8.835	18	1.666	.5931	56
26	1-1/2	3.55	6	7.715	48	4.800	.2083	54
	2	4.85	6	7.875	36	3.600	.2777	53
	2-1/2	6.20	6	8.196	30	2.904	.3442	54
	3	7.50	6	8.585	24	2.249	.4446	52
	3-1/2	8.90	6	8.709	20	1.874	.5336	54
	4	10.30	6	9.106	18	1.636	.6112	56
27	1-1/2	3.65	6	7.969	48	4.666	.2142	54
	2	5.05	6	8.093	36	3.484	.2870	53
	2-1/2	6.40	6	8.466	30	2.812	.3556	54
	3	7.70	6	8.851	24	2.181	.4585	52
	3-1/2	9.15	6	8.973	20	1.818	.5501	54
	4	10.55	6	9.381	18	1.588	.6297	56

To determine number of cartons necessary to insulate a given length of pipe, refer to example on Page 6.

KAYLO BEVELED LAGS

Nominal Pipe Size (Inches)	Thickness (Inches)	LIST PRICES per Lineal Foot	PRODUCT AND PACKAGING DATA: Trim Angle (Degrees)	Sq. Ft. of Block per Lineal Foot	No. Lags Per Carton	Lineal Feet per Carton	Reciprocal of Lineal Feet per Carton	Weight per Carton (pounds)
28	1-1/2	$2.75	6	8.231	48	6.498	.2223	54
	2	5.15	6	8.607	36	3.272	.3056	53
	2-1/2	6.65	6	8.778	30	2.727	.3667	54
	3	8.40	6	9.117	24	2.118	.4721	52
	3-1/2	9.45	6	9.248	20	1.765	.5666	54
	4	11.00	6	9.663	18	1.542	.6485	56
29	1-1/2	4.00	6	8.486	48	4.363	.2292	54
	2	5.50	6	8.865	36	3.177	.3542	53
	2-1/2	6.95	6	8.990	30	2.648	.3776	54
	3	8.40	6	9.390	24	2.056	.4863	52
	3-1/2	10.85	6	9.526	20	1.713	.5838	54
	4	11.65	6	9.936	18	1.500	.6667	56
30	1-1/2	4.00	6	8.741	48	4.236	.2360	54
	2	5.50	6	9.121	36	3.084	.3242	53
	2-1/2	6.95	6	9.269	30	2.571	.3889	54
	3	8.40	6	9.656	24	2.000	.5000	52
	3-1/2	10.85	6	9.795	20	1.666	.6002	54
	4	11.65	6	10.269	18	1.459	.6854	56
31	1-1/2	4.30	6	9.003	48	4.113	.2431	54
	2	5.90	6	9.390	36	3.000	.3333	53
	2-1/2	7.40	6	9.522	30	2.500	.4000	54
	3	9.10	5	9.777	24	1.946	.5138	53
	3-1/2	10.70	5	10.138	20	1.578	.6337	55
	4	12.40	5	10.394	18	1.420	.7042	57
32	1-1/2	4.30	5	9.186	48	4.000	.2500	54
	2	5.90	5	9.557	36	2.919	.3425	54
	2-1/2	7.40	5	9.866	30	2.433	.4110	55
	3	9.10	5	10.047	24	1.894	.5279	53
	3-1/2	10.70	5	10.490	20	1.538	.6500	55
	4	12.40	5	10.562	18	1.384	.7225	57
33	1-1/2	4.40	5	9.458	48	3.882	.2599	54
	2	6.05	5	9.885	36	2.841	.3519	54
	2-1/2	7.60	5	9.933	30	2.368	.4772	55
	3	9.30	5	10.309	24	1.846	.5417	53
	3-1/2	10.95	5	10.434	20	1.500	.6667	55
	4	12.70	5	10.831	18	1.350	.7409	57
34	1-1/2	4.55	5	9.698	48	3.788	.2639	54
	2	6.25	5	10.071	36	2.769	.3611	54
	2-1/2	7.80	5	10.192	30	2.308	.4345	55
	3	9.50	5	10.570	24	1.800	.5555	53
	3-1/2	11.20	5	10.946	20	1.463	.6835	55
	4	13.10	5	11.107	18	1.316	.7589	57
35	1-1/2	4.80	5	9.951	48	3.692	.2708	54
	2	6.55	5	10.336	36	2.700	.3703	54
	2-1/2	8.20	5	10.450	30	2.251	.4442	55
	3	9.95	5	10.803	24	1.755	.5698	53
	3-1/2	11.80	5	11.211	20	1.428	.7003	55
	4	13.65	5	11.375	18	1.285	.7782	57
36	1-1/2	4.85	5	10.204	48	3.601	.2777	54
	2	6.55	5	10.590	36	3.633	.3787	54
	2-1/2	8.20	5	10.717	30	2.195	.4555	55
	3	9.95	5	11.102	24	1.714	.5834	53
	3-1/2	11.80	5	11.475	20	1.395	.7168	55
	4	13.65	5	11.643	18	1.256	.7962	57

To determine number of cartons necessary to insulate a given length of pipe, refer to example on Page 6

AP 700 BOARD

LAYLO BEVELED LAGS

Nominal Pipe Size (Inches)	Thickness (Inches)	LIST PRICES per Lineal Foot	PRODUCT AND PACKAGING DATA: Trim Angle (Degrees)	Sq. Ft. of Block per Lineal Foot	No. Lags Per Carton	Lineal Feet Per Carton	Reciprocal of Lineal Feet per Carton	Weight per Carton (pounds)
37	1-1/2	54.94	3-1/2	10.500	48	2.428	.3917	
	2	6.70	3-1/2	10.667	36	2.512	.3980	
	2-1/2	9.22	3-1/2	10.967	30	2.093	.4777	
	3	10.36	3-1/2	11.340	24	1.635	.6116	
38	1-1/2	5.06	3-1/2	10.767	48	2.559	.3985	
	2	6.86	3-1/2	10.985	36	2.458	.4075	
	2-1/2	9.45	3-1/2	11.222	30	2.045	.4889	
	3	10.59	3-1/2	11.595	24	1.693	.5910	
39	1-1/2	5.18	3-1/2	11.000	48	2.291	.3957	
	2	7.02	3-1/2	11.355	36	2.400	.4166	
	2-1/2	10.18	3-1/2	11.475	30	2.000	.5000	
	3	10.69	3-1/2	11.850	24	1.565	.6389	
40	1-1/2	5.29	3-1/2	11.250	48	2.200	.3325	
	2	7.17	3-1/2	11.605	36	2.348	.4258	
	2-1/2	10.40	3-1/2	11.727	30	1.956	.5112	
	3	10.85	3-1/2	12.113	24	1.531	.6531	
41	1-1/2	5.41	3-1/2	11.497	48	2.131	.3193	
	2	7.33	3-1/2	11.867	36	2.297	.4353	
	2-1/2	10.63	3-1/2	11.987	30	1.914	.5224	
	3	11.08	3-1/2	12.366	24	1.500	.6666	
42	1-1/2	5.53	3-1/2	11.757	48	2.063	.3064	
	2	7.49	3-1/2	12.117	36	2.248	.4444	
	2-1/2	10.86	3-1/2	12.240	30	1.875	.5333	
	3	11.31	3-1/2	12.623	24	1.469	.6807	
43	1-1/2	5.65	3-1/2	12.000	48	2.000	.3333	
	2	7.64	3-1/2	12.362	36	2.204	.4584	
	2-1/2	11.08	3-1/2	12.492	30	1.837	.5443	
	3	11.55	3-1/2	12.885	24	1.439	.6949	
44	1-1/2	5.76	3-1/2	12.247	48	2.939	.3402	
	2	7.80	3-1/2	12.619	36	2.159	.4631	
	2-1/2	11.31	3-1/2	12.752	30	1.779	.5548	
	3	11.77	3-1/2	13.161	24	1.413	.7082	
45	1-1/2	5.88	3-1/2	12.502	48	2.869	.3473	
	2	7.95	3-1/2	12.869	36	2.117	.4723	
	2-1/2	11.54	3-1/2	13.002	30	1.744	.5668	
	3	12.00	3-1/2	13.396	24	1.384	.7223	
46	1-1/2	6.00	3-1/2	12.750	48	2.823	.3542	
	2	8.11	3-1/2	13.119	36	2.077	.4814	
	2-1/2	11.99	3-1/2	13.317	30	1.697	.5892	
	3	12.24	3-1/2	13.669	24	1.358	.7363	
47	1-1/2	6.11	3-1/2	12.997	48	2.769	.3611	
	2	8.27	3-1/2	13.376	36	2.037	.4909	
	2-1/2	12.21	3-1/2	13.420	30	1.666	.6002	
	3	12.47	3-1/2	13.914	24	1.333	.7501	
48	1-1/2	6.23	3-1/2	13.252	48	2.716	.3681	
	2	8.42	3-1/2	13.626	36	2.000	.5000	
	2-1/2	12.44	3-1/2	14.022	30	1.636	.6112	
	3	12.69	3-1/2	14.169	24	1.309	.7639	
49	1-1/2	6.35	3-1/2	13.500	48	2.666	.4838	
	2	8.57	3-1/2	13.876	36	1.963	.5094	
	2-1/2	12.67	3-1/2	14.269	30	1.606	.6226	
	3	12.93	3-1/2	14.669	24	1.285	.7782	
50	1-1/2	6.47	3-1/2	13.747	48	2.618	.4612	
	2	8.73	3-1/2	14.133	36	1.928	.5186	
	2-1/2	12.89	3-1/2	14.535	30	1.578	.6337	
	3	13.16	3-1/2	14.687	24	1.263	.7912	

To determine number of cartons necessary to insulate a given length of pipe, refer to example on Page 6.

LAYLO BEVELED LAGS

Nominal Pipe Size (Inches)	Thickness (Inches)	LIST PRICES per Lineal Foot	PRODUCT AND PACKAGING DATA: Trim Angle (Degrees)	Sq. Ft. of Block per Lineal Foot	No. Lags Per Carton	Lineal Feet Per Carton	Reciprocal of Lineal Feet per Carton	Weight per Carton (pounds)
51	1-1/2	6.59	3-1/2	14.002	48	2.570	.3891	
	2	8.89	3-1/2	14.383	36	1.894	.5279	
	2-1/2	13.12	3-1/2	14.787	30	1.551	.6447	
	3	13.39	3-1/2	14.943	24	1.241	.8058	
52	1-1/2	6.70	3-1/2	14.750	48	2.526	.3958	
	2	9.04	3-1/2	14.622	36	1.862	.5370	
	2-1/2	13.35	3-1/2	15.047	30	1.525	.6557	
	3	13.71	3-1/2	15.200	24	1.200	.8333	
53	1-1/2	6.82	3-1/2	14.897	48	2.483	.4077	
	2	9.06	3-1/2	14.658	36	1.830	.5464	
	2-1/2	13.43	3-1/2	15.140	30	1.500	.6666	
	3	13.93	3-1/2	15.552	24	1.180	.8474	
54	1-1/2	6.84	3-1/2	14.757	48	2.480	.4198	
	2	9.36	3-1/2	15.140	36	1.890	.5555	
	2-1/2	13.65	3-1/2	15.389	30	1.475	.6779	
	3	13.96	3-1/2	15.552	24	1.180	.8474	
55	1-1/2	7.06	3-1/2	15.000	48	2.400	.4166	
	2	9.31	3-1/2	15.389	36	1.770	.5649	
	2-1/2	13.88	3-1/2	15.647	30	1.451	.6891	
	3	14.17	3-1/2	15.837	24	1.161	.8613	
56	1-1/2	7.29	3-1/2	15.509	48	2.377	.4206	
	2	9.67	3-1/2	15.647	36	1.741	.5743	
	2-1/2	14.10	3-1/2	15.897	30	1.428	.7002	
	3	14.62	3-1/2	16.387	24	1.125	.8888	
57	1-1/2	7.51	3-1/2	15.750	48	2.285	.4376	
	2	9.82	3-1/2	15.889	36	1.716	.5834	
	2-1/2	14.32	3-1/2	16.146	30	1.406	.7112	
	3	14.85	3-1/2	16.527	24	1.167	.8933	
58	1-1/2	7.53	3-1/2	15.997	48	2.250	.4444	
	2	9.98	3-1/2	16.146	36	1.687	.5927	
	2-1/2	14.55	3-1/2	16.404	30	1.384	.7225	
	3	15.08	3-1/2	16.830	24	1.090	.9174	
59	1-1/2	7.65	3-1/2	16.252	48	2.215	.4514	
	2	10.14	3-1/2	16.404	36	1.661	.6020	
	2-1/2	14.77	3-1/2	16.654	30	1.363	.7336	
	3	15.30	3-1/2	17.082	24	1.074	.9310	
60	1-1/2	7.78	3-1/2	16.500	48	2.181	.4585	
	2	10.29	3-1/2	16.654	36	1.636	.6112	
	2-1/2	14.99	3-1/2	16.904	30	1.342	.7446	
	3	15.54	3-1/2	17.342	24	1.058	.9451	
61	1-1/2	7.88	3-1/2	16.747	48	2.149	.4653	
	2	10.61	3-1/2	17.161	36	1.588	.6297	
	2-1/2	15.44	3-1/2	17.411	30	1.334	.7668	
	3	15.76	3-1/2	17.595	24	1.043	.9587	
62	1-1/2	7.99	3-1/2	17.000	48	2.117	.4723	
	2	10.76	3-1/2	17.411	36	1.565	.6389	
	2-1/2	15.67	3-1/2	17.661	30	1.315	.7782	
	3	15.99	3-1/2	17.847	24	1.078	.9727	
63	1-1/2	8.11	3-1/2	17.250	48	2.086	.4793	
	2	10.91	3-1/2	17.661	36	1.543	.6480	
	2-1/2	15.89	3-1/2	17.918	30	1.267	.7892	
	3	16.22	3-1/2	18.107	24	1.030	.9871	

To determine number of cartons necessary to insulate a given length of pipe refer to example on Page 6.

KAYLO BEVELED LAGS

Nominal Pipe Size (Inches)	Thickness (Inches)	LIST PRICES per Linear Foot	PRODUCT AND PACKAGING DATA: Trim Angle (Degrees)	Sq. Ft. of Block per Linear Foot	Pcs. Lags Per Carton	Linear Feet Per Carton	Reciprocal of Linear Feet per Carton	Weight per Carton (pounds)
6#	1-1/2	$ 8.23	2-1/2	17.497	48	2.057	.4861	
	2	11.07	2-1/2	17.918	36	1.520	.6578	
	2-1/2	14.11	2-1/2	18.168	30	1.250	.8000	
	3	16.45	2-1/2	18.360	24	1.000	1.0000	
8#	1-1/2	8.35	2-1/2	17.752	48	2.027	.4933	
	2	11.23	2-1/2	18.168	36	1.500	.6666	
	2-1/2	14.34	2-1/2	18.418	30	1.233	.8110	
	3	16.68	2-1/2	18.612	24	.0986	1.0141	
10#	1-1/2	8.47	2-1/2	18.000	48	2.000	.5000	
	2	11.38	2-1/2	18.418	36	1.479	.6761	
	2-1/2	14.56	2-1/2	18.675	30	1.216	.8223	
	3	16.91	2-1/2	18.873	24	.0972	1.0288	
12#	1-1/2	8.58	2-1/2	18.247	48	1.972	.5070	
	2	11.54	2-1/2	18.675	36	1.459	.6854	
	2-1/2	14.79	2-1/2	18.925	30	1.200	.8333	
	3	17.13	2-1/2	19.125	24	0.960	1.0416	
14#	1-1/2	8.70	2-1/2	18.507	48	1.945	.5141	
	2	11.69	2-1/2	18.925	36	1.440	.6944	
	2-1/2	17.01	2-1/2	19.175	30	1.184	.8445	
	3	17.36	2-1/2	19.377	24	0.947	1.0559	
16#	1-1/2	8.87	2-1/2	18.758	48	1.930	.5288	
	2	11.83	2-1/2	19.175	36	1.421	.7037	
	2-1/2	17.24	2-1/2	19.432	30	1.168	.8561	
	3	17.59	2-1/2	19.637	24	0.934	1.0706	
20	1-1/2	8.94	2-1/2	18.997	48	1.894	.5279	
	2	12.01	2-1/2	19.432	36	1.402	.7132	
	2-1/2	17.46	2-1/2	19.682	30	1.153	.8673	
	3	17.82	2-1/2	19.890	24	0.023	1.0834	
24	1-1/2	9.06	2-1/2	19.252	48	1.868	.5350	
	2	12.16	2-1/2	19.682	36	1.384	.7225	
	2-1/2	17.68	2-1/2	19.932	30	1.139	.8779	
	3	18.05	2-1/2	20.142	24	0.911	1.0976	
32	1-1/2	9.18	2-1/2	19.500	48	1.846	.5417	
	2	12.32	2-1/2	19.932	36	1.367	.7315	
	2-1/2	17.91	2-1/2	20.189	30	1.124	.8896	
	3	18.28	2-1/2	20.403	24	0.899	1.1123	

"Reciprocal of Lineal Feet per Carton" in table above & on preceding page is for use in calculating the number of cartons necessary to insulate a given length of pipe.

Example: How many cartons are required to insulate 1800 lineal feet of 30" pipe to 2-1/2" thickness?

1000 x .3599 = 359.9 or 360 cartons

LOAD FACTORS indicate the % of CL or TL of one package of each item.

To convert into % of CL or TL for items ordered, multiply factor times number of packages of the item

LOAD FACTORS

Thickness	CL	TL	Thickness	CL	TL	Thickness	CL	TL
1-1/2"	.16	.25	2-1/2"	.16	.24	3-1/2"	.16	.29
2"	.16	.25	3"	.16	.25	4"	.16	.25

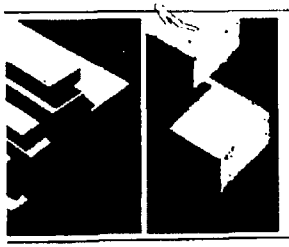
375015

OWENS CORNING
FIBERGLAS

Commercial D.12
Industrial D.28
October, 1971

Kaylo 10 & Kaylo 20 Block Insulation

rigid calcium silicate insulations for all types of heated equipment operating at temperatures up to 1800F.



uses

Kaylo 10* Block is for use on indoor or outdoor equipment operating at temperatures up to 1200F. Kaylo block is ideally suited for use on stainless steel vessels and equipment as it helps inhibit stress corrosion cracking. Typical applications are for boilers, breeching, tanks, vessels. Kaylo 10 Block is white in color.

Kaylo 20* with its high temperature limit of 1800F extends its use to include refractory wall backing for furnaces and boilers and fireproofing of equipment and vessel skirts.

description

Kaylo 10 and Kaylo 20 Block insulations are rigid hydrous calcium silicate heat insulations reinforced with asbestos fibers. They are strong, efficient and are highly resistant to abrasion and moisture damage. Kaylo 20 has a slightly pink color to distinguish it from Kaylo 10.

benefits

high thermal efficiency both Kaylo 10 and Kaylo 20 offer excellent thermal efficiency coupled with high strength. A low k of .40 for Kaylo 10 and .52 for Kaylo 20 at 200F mean temperature proves that Kaylo will provide significant savings in operating costs over the life of the equipment.

resistant to abuse resists mechanical damage because of hard, tough, reinforced structure.

strong less breakage in shipment and handling. High temperatures have little effect on strength characteristics.

will not cause stress corrosion cracking Kaylo 10 will not cause stress corrosion cracking of stainless steel because it contains sodium silicate as an inhibitor, and has a very low chloride content.

resistant to moisture damage unlike many other insulations, Kaylo is not affected appreciably from moisture damage. It regains thermal efficiency and strength after drying out. Outdoor installations must be weatherproofed, however, for long continuous service.

dimensionally stable Kaylo does not shrink appreciably in service, even at elevated temperatures. This means less heat leakage at the joints. And Kaylo will not warp or crack in service.

fabricates easily ordinary insulators tools are all that is required to fabricate Kaylo. It cuts with a clean true edge for tighter fit at the joints. Fittings are neater and faster.

375016

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AT 700 SOARD

Performance characteristics

	KAYLO 10	KAYLO 20
density:	11 pcf approx	12 pcf approx
flexural strength: (ASTM C 203)	40 psi average	65 lb /sq. in.
compressive strength: (ASTM C 165) at 5% deformation	115 psi	110 psi
fire hazard classification: (ASTM E-84)		
flame spread	0	0
smoke developed	0	0
fuel contributed	0	0
hardness: (ASTM C-869)	.60	.70

resistance to abrasion: (ASTM C 421)

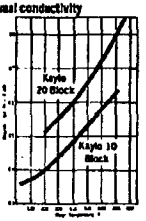
after 20 minutes 45% max

after 10 minutes 20% max

dimensional stability: (ASTM C 356)

linear shrinkage after heating for 24 hours in muffle at 1200F.—1.4% (Kaylo 10) for 24 hours in muffle at 1800F.—2.0% (Kaylo 20)

thermal conductivity



economic thickness*

Selection of insulation thicknesses for any specific application should take into consideration the following important criteria 1. Cost of insulation applied. 2. Cost of heat energy. 3. Cost of capital 4. Cost of depreciation—plant and insulation 5. Capital investment in heat production equipment.

6. Temperature differential. 7. Size of the pipe or surface. 8. Conductivity of insulation.

*From "How to Determine Economic Thickness of Insulation"—National Insulation Manufacturers Association.

economic thickness— Kaylo 10 block to 1200 F—ambient still air 80 F

ET—economic thickness
ST—surface temperature
HL—heat loss Btu/hr sq. foot

THICK	200 F		300 F		400 F		500 F		600 F		700 F		800 F		900 F		1000 F		1100 F		1200 F	
	HEAT LOSS	SURF TEMP	HEAT LOSS	SURF TEMP	HEAT LOSS	SURF TEMP	HEAT LOSS	SURF TEMP	HEAT LOSS	SURF TEMP	HEAT LOSS	SURF TEMP	HEAT LOSS	SURF TEMP	HEAT LOSS	SURF TEMP	HEAT LOSS	SURF TEMP	HEAT LOSS	SURF TEMP	HEAT LOSS	SURF TEMP
1 000	38	103	72	124	109	143																
1 500	27	96	51	111	78	127	107	145														
2 000	21	93	40	104	60	117	83	130	107	145												
2 500	17	90	33	100	49	110	68	121	87	133	109	146										
3 000	14	89	28	97	42	105	57	115	74	125	92	136	112	148								
3 500	13	88	24	95	38	102	49	110	64	119	83	129	97	138	116	150						
4 000	11	87	21	93	32	99	44	107	56	116	70	122	85	132	102	142	120	153				
4 500	10	86	19	90	29	97	39	104	50	113	63	118	76	127	91	136	107	145	125	155		
5 000	9	85	17	90	26	96	35	101	45	108	57	115	69	122	82	130	97	139	113	149	130	159
5 500	8	85	16	89	23	94	32	100	42	105	52	112	63	118	75	128	88	134	103	143	118	152
6 000	7	85	14	89	22	93	30	98	38	103	48	109	58	115	69	122	81	130	94	135	109	146

*calculated

Kaylo 20 Block to 1800 F—ambient still air 80 F

Operating Temp. F	Power ET	Power HL	Power ST	Process ET	Process HL	Process ST
1300	7½	111	126	6	135	148
1400	8	117	139	6½	143	152
1500	8	123	142	7	151	155
1600	8½	129	145	7	158	159
1700	9	135	148	7½	165	163
1800	9½	141	151	7½	172	166

specification compliance

NH-I 523c Insulation Block, Pipe Covering, Thermal, (Calcium Silicate for temperatures up to 1200°F). Type 1.

MIL-I-2819E Insulation Block, Thermal. Class 1, 2, and 3.

ASTM C533-67.

MIL 1-24244 (Amend. 3) (Ships) Insulating Materials. Thermal, with Special Corrosion and Chlorids Requirements (Kaylo 10 only), Type 3A, 3B.

sizes

thickness—1", 1½", 2", 2½", 3", 3½" and 4"
width—3", 6", 12" and 18"
length—18" to 36"
form—Block

beveled lags

For pipe sizes greater than those for which Kaylo 10 and Kaylo 20 Pipe Insulation sizes are available, Kaylo 10 and Kaylo 20 beveled lags may be used to insulate piping. Lags beveled to fit pipes from 18" to 72" in diameter are available in thickness of 1½," 2", 2½", 3". Lags are 36" long and 3" wide

application recommendations

Kaylo 10 & 20 Block insulations are held in place by mechanically fastening with bands, welded rods or studs. The insulation may be finished with a trowel coat of insulating cement, canvassed and painted. Outdoor installations require weatherproofing with mastic or metal jacketing

OWENS CORNING FIBERGLAS

OWENS-CORNING FIBERGLAS CORPORATION
Mechanical Products Division
Fiberglas Tower, Toledo, Ohio 43659

Pub. No. 1-HN-4349-C Litho in U.S.A. Oct., 1971

3750

AP 700 SERIES

FIBERGLAS

Industrial Insulation
700 Series

INDUSTRIAL CONTRACTORS

Prices

No. IN-3-31
Page 1 of 2
Date 6-1-72
Supersedes 5-1-72
EFFECTIVE 6-1-72

All sales are subject to Owens-Corning Fiberglas Corporation general terms and conditions of sale.

PAYMENT TERMS: 1% 10th Prox., in dollar amount shown on invoice (no discount on transportation costs or add-on charges); Net 30th Prox.

SHIPPING TERMS: Ex Factory: FOB shipping point, frt allowed on sellers routing; additional trans. charges are extra. Ex. Warehouse: FOB warehouse, frt allowed on sellers routing

FIBERGLAS 700 SERIES INDUSTRIAL INSULATIONS are fine-fiberad, board-like products designed for a variety of industrial and commercial applications where thermal and acoustical performance is a criteria. All types are available plain. Types 703, 704, and 705 are available with the following facings and coating:

SP Facing - faced 1 side with Duplex Laminated Kraft.
FF Facing - faced 1 side with .0085" Embossed Aluminum Foil.
FRK Facing - faced 1 side with Foil-Reinforced Kraft.
Coated - Coated 1 or both sides with a clear coating.

STANDARD ITEMS ARE 24" X 48"

PLAIN INSULATIONS

TYPE	Nominal Density	Avail. Thick-nesses	List Prices Per 1000 SF 1" Thick @ Bundles CL	TL	LTL	PACKAGING DATA (24" X 48") Closed End Bundles SF Per Bundle 1"	1-1/2"	2"	Cartons SF Per Carton 2"	1-1/2"	1"	Min. Release Qty. Per MFR Item
700	1.08	1" - 4"	$36.80	$38.00	$37.30	384	256	192	384	256	192	10 MSF
701	1.5	1" - 6"	48.00	50.00	48.50	352	240	176	352	240	176	10 MSF
702	2.25	1" - 3"	69.00	72.00	71.00	256	160	128	256	160	128	10 MSF
703	3.0	1" - 3"	81.00	84.00	82.50	128	80	64	144	96	72	5 MSF
704	4.2	1/2"-2"	105.00	110.00	108.20	144	96	72	144	96	72	5 MSF
705	6.0	1/2"-2"	154.00	161.00	157.90	144	96	72	144	96	72	5 MSF

For Carton Packaging ADD $4.00/MSF to the CL or TL price for 1" Thick shown above. (Quick-Ship-Order)

@ Prices for thicknesses other than 1" are calculated as follows:
For Thicknesses greater than 1" - Multiply the price for 1" thick (Including pkg.) by the thickness ordered.
For Thicknesses less than 1": 3/4"price = 1" price (including pkg.) x .80
5/8"price = 1" price (including pkg.) x .70
1/2"price = 1" price (including pkg.) x .60

CAS: IN-174
CAI: IN05

FACED INSULATIONS

FACING	TYPE SP In Closed End Bundles @ List Prices Per MSF			Pkg.24x48	TYPES FF or FRK In Cartons List Prices Per MSF			Pkg.24x48	COATED ONE SIDE In Cartons * List Prices Per MSF			Pkg.24x48
THICKNESS	CL	TL	LTL	SF Per CRT	CL	TL	LTL	SF Per Ctn	CL	TL	LTL	SF/Ctn
703 1"	$120.00	$125.00	$122.90	144	$162.00	$168.00	$165.00	144	$138.00	$145.00	$142.00	144
1-1/2"	162.00	170.00	166.30	96	206.00	215.00	211.00	96	183.00	190.00	187.00	96
2"	204.00	213.00	208.80	72	253.00	263.00	257.00	72	229.00	239.00	234.00	72
704 3/8"	----	----	----	----	----	----	----	----	141.00	148.00	145.00	224
1"	129.00	134.00	131.50	144	187.00	194.00	191.00	144	172.00	179.00	176.00	144
1-1/2"	181.00	189.00	185.50	96	243.00	254.00	249.00	96	229.00	239.00	234.00	96
2"	236.00	247.00	242.30	72	300.00	312.00	306.00	72	287.00	299.00	294.00	72
705 1"	199.00	207.00	203.52	96	236.00	244.00	239.00	96	219.00	229.00	225.00	144
1-1/2"	235.00	247.00	241.90	64	315.00	328.00	322.00	64	296.00	309.00	302.00	96
2"	353.00	368.00	361.50	48	396.00	416.00	406.00	48	388.00	395.00	389.00	72

* For Coating both sides on Kraft-to-Kraft Basis, ADD $35.00/MSF to prices for Coated One Side.
@ For Carton packaging on Type SP, available on a made-to-order basis, ADD $4.00/MSF x thickness ordered to appropriate price shown above.

ANY QUANT (FULL BDL) C/L - 8%
DEL. TO WAREHOUSE OR JOB SITE $22/HR

OWENS-CORNING FIBERGLAS SUPPLY DIVISION
991 W. SWEDESFORD ROAD (ROUTE 202 SOUTH), BERWYN, PA. 19312
PHONE: BERWYN 215-647-2700 PHILA OR 7-3023

375018

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Prices

No. IN 3-21
Page 2 of 2
Date 5-1-72
Supersedes 5-1-72

SIZES AVAILABLE (in inches)

PLAIN

TYPE	Available from Factory Width	Available from Factory Length
700 701 702	12, 18, 24, or 36	24, 48, 60, or 72
703	12, 24, 18, 36, or 48	24, 36, 48, 60, or 72
	24, 48	96*
704	12, 24, or 48	24, 48, 36, 60, or 72
	48	96*

FACED

TYPE	Available From Factory Width	Available From Factory Length
SF	48	24, 36, or 48
FF or FRK	24 or 48	36, 48, 60 72, or 96
Coated 1 or 2 Sides	24 or 48	36 or 48

*96" Length available in cartons only.
Consult CAS for packaging and Load Factor Data

At OCF option any Made-To-Order item may be shipped and billed in excess of the minimum release quantity by no more than 5% or 2M units, whichever is less.

In all cases, shipment and billing will at least equal the quantity ordered.

CARLOAD AND TRUCKLOAD QUANTITY: Full Visible Carload or Truckload

CUSTOMER MUST SPECIFY ONE ITEM TO BE INCREASED OR DECREASED TO FILL VEHICLE TO CAPACITY.

Release in excess of one full carload or truckload does not require a variable item and the excess will be shipped seller's routing and invoiced at the same level as the full vehicle.

MINIMUM RELEASE QUANTITIES: Ex-Factory - Standard Items - 1 package of any Standard Item - Plain and FRK in a full TL or CL of Fiberglas products.
NTO Items - Plain - Per above table in a full TL or CL of Fiberglas products.
Faced - 5,000 SF of any one item in a full TL or CL of Fiberglas products.
ORDERS FOR LESSER QUANTITIES WILL NOT BE ACCEPTED.

Ex-Warehouse - One carton of any one standard item. Based on $100.00 minimum order. Freight extra on orders below $100.00.

OWENS-CORNING FIBERGLAS SUPPLY DIVISION
592 W. SWEDESFORD ROAD (ROUTE 202 SOUTH), BERWYN, PA. 19312
PHONE: SHERIDAN 215-647-2700 PHILA CR 7-2023

375019

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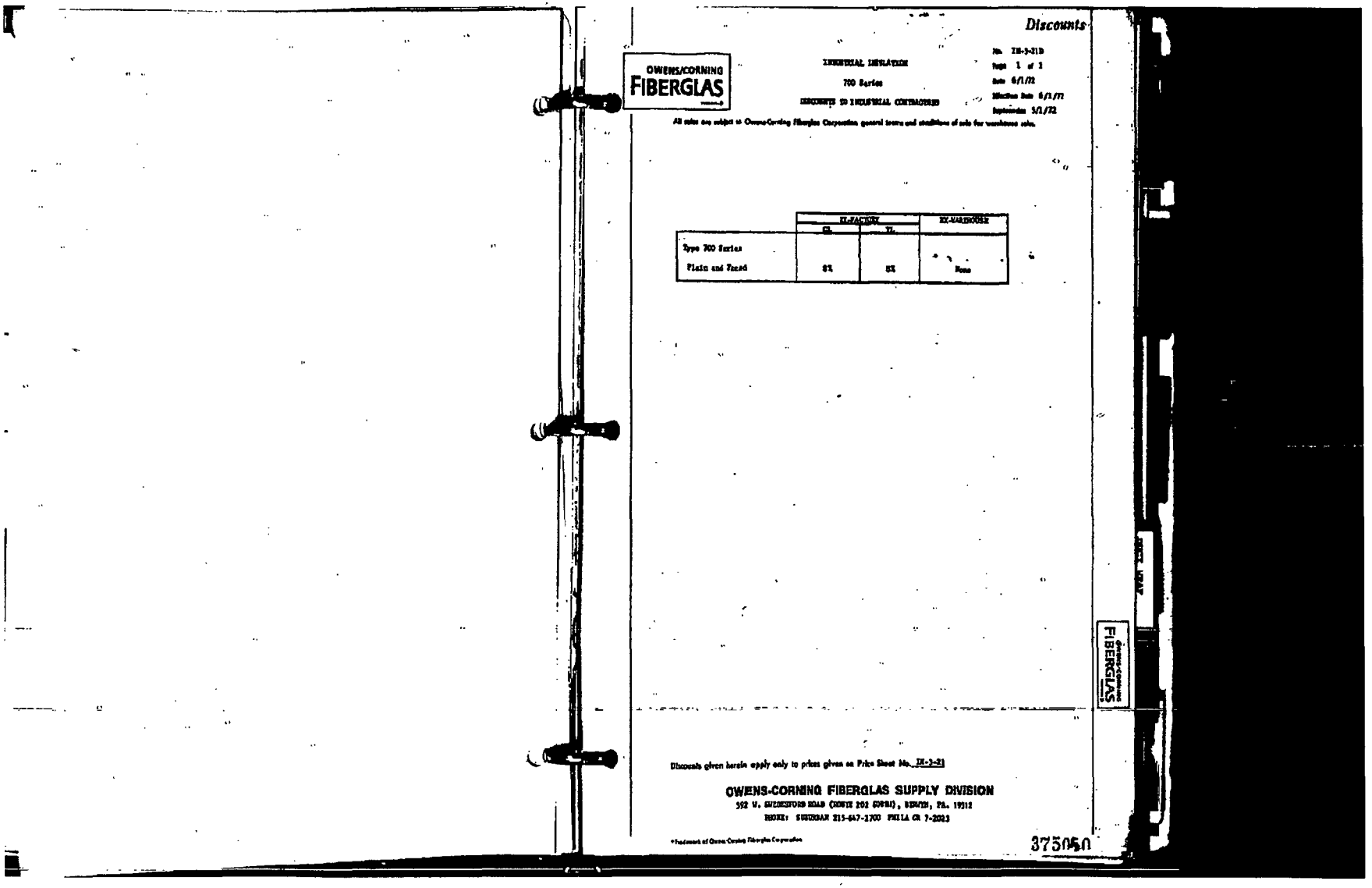

OWENS/CORNING FIBERGLAS

Discounts

INDUSTRIAL INSULATION

700 Series

DISCOUNTS TO INDUSTRIAL CONTRACTORS

No. IN-3-21D
Page 1 of 1
Date 6/1/72
Effective Date 6/1/72
Supersedes 5/1/72

All sales are subject to Owens-Corning Fiberglas Corporation general terms and conditions of sale for warehouse sales.

	EX-FACTORY		EX-WAREHOUSE
	CL	VL	
Type 700 Series			
Plain and Faced	8%	8%	None

Discounts given herein apply only to prices given on Price Sheet No. IN-3-21

OWENS-CORNING FIBERGLAS SUPPLY DIVISION

592 W. SWEDESFORD ROAD (ROUTE 202 SOUTH), BERWYN, PA. 19312

PHONE: SUBURBAN 215-647-2700 PHILA CR 7-2023

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375050

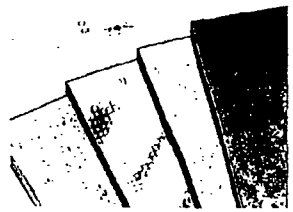
OWENS-CORNING FIBERGLAS

OWENS CORNING
FIBERGLAS

Commercial 0.9
Industrial 0.35
August, 1970

Industrial Insulation 700 Series

A highly versatile group of Fiberglas insulating boards designed to insulate ductwork and equipment operating at temperatures up to 450F.



uses

The 700 Series boards have been designed primarily to insulate heating and air conditioning ducts, ovens, tanks, boilers, hot water generators and other hot equipment.

type 700 — a low cost flexible material suitable for insulating factory-fabricated metal panels and for packing into irregular spaces

type 701 — A lightweight resilient insulation, in board form, used on vessels having irregular surfaces where the exterior finish is supported by welded studs, pins or other mechanical attachments

type 702 — More rigid than 701 and is recommended for use on equipment and ductwork subject to minimum maintenance and construction abuse

type 703 — A semi-rigid board recommended for use on equipment, vessels and air conditioning ductwork.

description

Fiberglas * 700 Series Industrial Insulations are made of inorganic glass fibers pre-formed into semi rigid to rigid rectangular boards of varying densities. The series consists of Type 700, 701, 702, 703, 704 and 705. Each type has specific thermal and physical characteristics which makes it suitable for the uses described. Type 703, 704 and 705 are available with a variety of factory-applied vapor-barrier facings to prevent condensation on cold surfaces and to provide a neat finished appearance. Fire Retardant Facings are available.

type 704 — A rigid board recommended for use on heating and air conditioning ductwork in exposed areas where sharp, true corners and smooth surfaces are desired.

type 705 — A rigid board with very high strength characteristics for use on chillers, hot and cold equipment, heating and air conditioning ductwork where greater abuse resistance and good appearance is required.

benefits

lower operating costs — the exceptional thermal efficiency of Fiberglas 700 Series insulations lowers operating costs.

end-use tailored — a variety of densities and facings offers a selection of products to meet specific performance and economic requirements.

continuous in-place performance — 700 Series resists damage, maintains structural integrity and efficiency. Thickness stays uniform.

neat, finished appearance — the boardlike characteristics of the heavier density 703, 704 and 705 products provide neat square corners. The factory-applied facings present an attractive finished appearance.

fire safe — Fiberglas is inherently fire safe. The unfaced boards and the Aluminum Foil Faced 703, 704 and 705 have UL Flame Spread ratings of less than 25

*Trademark Registered Owens Corning Fiberglas Corporation

Performance characteristics

sound absorption coefficients (2" thick #6 mounting)

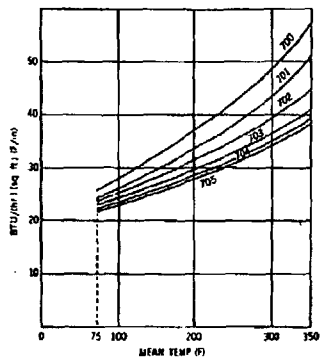
TYPE	125	250	500	1000	2000	4000	NRC
701	.34	.70	.96	.97	.86	.83	.87
702	.28	.77	.96	.98	.87	.87	.89
703	.32	.74	.97	.98	.87	.85	.89
704	.27	.79	.98	.99	.88	.86	.91
705	.48	.82	.97	.99	.90	.86	.92

size and density

Type	Density (pcf)	Thickness (in ½" increments)	Compressive Strength (psf at 10% deformation)	Standard Size	Therm. Cond. @ 75F Mean Temp.
700	1.08	1"–4"	3†		0.260
701	1.58	1"–4"	4.5†		0.242
702	2.25	1"–3"	9.5†	24" x 48"*	0.235
703	3.00	1"–2"	100		0.230
704	4.20	1"–2"	200		0.230
705	6.00	1"–2"	350		0.220

*For special applications, boards up to 48" x 96" are available. †After compression packaged.

thermal conductivity



moisture absorption	less than 0.2% by volume
bacteria and fungus resistance	does not breed nor promote
odor	odorless
humidity and temperature effect	cycling conditions will not cause spalling or crumbling
corrosion	does not accelerate corrosion of copper, steel or aluminum.

facings

Type 703, 704 and 705 are also available with the following factory applied vapor barrier facings:

FF—.0025 aluminum foil (UL Rated)
FRK—Foil-reinforced kraft (available UL Rated if specified in order)
SF—Duplex Laminated kraft
COATED—either clear or black

fire hazard classification

	unfaced (700, 701, 702)	(703, 704, 705)	foil-faced (703, 704, 705)
flame spread	10-20	15	15-20
fuel contributed	10-15	15	20-25
smoke developed	0-20	0	0

(compared to untreated Red Oak at 100)

application recommendations

Type 700, 701, 702 — Lightweight unfaced flexible insulations in board sizes for use on vessels having irregular surfaces where the insulation is supported by welded studs or stiffeners and not by the insulation itself. The products are self-supporting but are generally secured with mechanical fasteners and protected by sheet metal.

Type 703, 704, 705 — These board insulations are normally supplied on welded pins on flat surfaces. They are cut in segments and bonded in place on irregular surfaces. Unfaced boards are normally finished with reinforced insulating cement or weatherproof mastic. Faced boards, with joints taped to provide a continuous vapor barrier, may be left unfinished or may be canvas jacketed.

recommended thickness — heated equipment

(80F ambient air)

Service	Type 700			Type 701			Type 702		
Temp.	RT	HL	ST	RT	HL	ST	RT	HL	ST
100	1½	11	87	1½	10	86	1½	10	86
250	2	74	93	2	71	93	2	70	92
350	3	79	98	2½	71	95	2½	70	95
450	3½	90	105	3	90	105	3	89	101

RT — recommended economic thickness, inches.
HL — heat loss (Btu/Hr/Sf hr)
ST — surface temperature (F).

thickness to prevent condensation

cold ducts and equipment

The following chart indicates the recommended thickness of Type 703, 704, 705 Faced Duct Insulation for installation on cold air ducts at various temperature differences (duct to air). Also shown are values for heat gain and approximate maximum relative humidity allowable.

Temperature Difference	Recommended Thickness (inches)	Heat Gain Btu/Hr-Sq	Permissible Relative Humidity
20	½	5.1	80%
25	½	6.4	83%
30	1	6.1	85%
35	1	7.1	87%
40	1½	6.7	88%
45	1½	8.3	89%
50	2	8.4	90%

specification compliance

MIL-I-551a, Form A, Class 1.	702, 703**, 704, 705
MIL-I-551a, Form A, Class 2.	703**, 704, 705
MIL-I-551a, Form B, Type 1, Class 1.	700, 701, 702
Navy Bureau of Yards and Docks, 16Y1	703**, 704, 705
Corps of Engineers, C E.—301.08, .11 thru .17	703**, 704, 705

**Type 703 is usually produced to conform with specifications of compliance in the above Federal Specification is required. Available plain or lined for use on hot or cold equipment and for air conditioning ductwork.

limitations

Industrial insulation 700 series, plain, should not be used on surfaces operating at temperatures above 450F. Types 703, 704, 705 faced products should not be used on surfaces operating at temperatures greater than 250F except that FF may be used at a maximum thickness of 2½ inches up to 450F.

caution

Owens-Corning Fiberglas insulations are to be applied only with approved adhesives, mastics and mechanical fastening devices as published in Accessory Materials Ltr. Feb. No. 1 IN 1958. Owens-Corning Fiberglas accepts no responsibility or liability for the performance of materials other than those listed unless approved in writing by O C F Testing Laboratories

375053

OWENS/CORNING
FIBERGLAS

OWENS-CORNING FIBERGLAS CORPORATION
Mechanical Products Division
Fiberglas Tower, Toledo, Ohio 43601

37505

Pub. No. 1-BI-2870-34 Litho in U.S.A. August 1970

OWENS CORNING
FIBERGLAS

Plumbing Systems 1.8.8
Mechanical Equipment 3.6.2.4
Air Handling Systems 4.8.10,11
March, 1972

Fiberglas 25*
ASJ (ALL SERVICE JACKET)

Duct and equipment insulation system −60° to −450°F

application specification

Figure 1 — Tools and accessory items:

A. Scissors
B. Nylon sealing tool
C. Stanley knife
D. Screw driver
E. End-Cutting nippers
F. Pre-finished fastener caps
G. OCF Joint Sealing Tape, ASJ (Pressure Sensitive, U.L. labeled)
H. OCF Fitting Mastic, Type C (U.L. labeled)



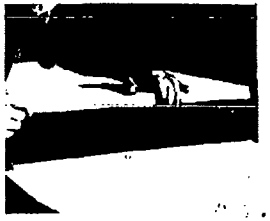
Figure 2

Attach pins to surface of duct and locate them not less than 3" in from each edge or corner of the board. For a neat job, keep pins in straight lines. Pin spacing along the duct should not be greater than 2" centers. On surfaces where cross breaking is used for stiffening, additional pins may be needed to hold the insulation tightly against the surface.



Figure 3

Cut Fiberglas 25 insulation to dimension and impale on pins. Apply pressure on facing in the area of the pin penetration. For elbows, cut pie-shaped pieces for top and bottom. Make sure insulation fits tightly at the seams before impaling.



*Fiberglas (Reg. U.S. Pat. Off.) and "25" are trademarks of Owens-Corning Fiberglas Corporation.

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Figure 4

Groove Fiberglas 25 Board for curved surfaces to half the board thickness using a duct grooving tool, saw or knife. Remove insulation from the slot. Fabricate flanges where required to cover raw edges of insulation on corners. Make the flanges long enough to extend at least ½" over the facing of the adjoining board. Staple in place. For finishing, refer to Fig. 11.



Figure 5

Install side pieces making sure the insulation is flush with the top and bottom board surfaces. Make flanges as outlined in Fig. 4 text and staple in place. Cover stapled area with joint sealing tape and seal down using moderate pressure to establish the bond. Caution: Do not attempt to use the 3" wide tape over edges. This should only be used on *flat* areas. Older 5" wide tape if corners are being covered by taping.



Figure 6

Cut pins to length as required and apply pre-finished fastener caps. Pins should protrude ⅛" to ¼" above the surface of the insulation. If more than ¼" shows, cut off to the correct length before applying the cap. This will assure a tight fit of insulation to the surface. Apply OCF Tubing Plastic Type C, about the size of a pen to the inside of the fastener cap before installation to form a vapor seal.

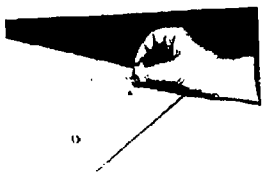


Figure 7

*Apply OCF Joint Sealing Tape, ASJ, to all transverse and longitudinal seams after insuring you have a dry, dust-free surface. Use the nylon sealing tool to apply pressure to the joint and make a good bond. Do not remove all the release paper from the tape but rather gradually pull it back as required. This keeps dust, etc. from fouling the adhesive surface. Make sure the tape is properly aligned with the seam before it is sealed down.

*As an alternate, when boards are not shiplapped as in Figure 5, 5" wide Type ASJ Tape must be used rather than the standard 3" material.



Figure 8

Use nylon sealing tool on all taped joints. This will result in a good bond and reduce air pocket and "fish-mouths". For a superior bond, use a 300F iron on the tape.

*If the iron has an aluminum base, a Teflon or other suitable sock must be used to prevent the transfer of oxidized aluminum from the iron to the tape.



Figure 9

Insulating the throat of an elbow. Prepare a Fiberglas 25 board of correct dimensions for the throat and fabricate the top and bottom flanges. Next, use a grooving tool, knife or saw and groove the board lengthwise up. Cut at least half way through the insulation.

Split sections may also be used as an alternate to the one-piece method described above.



375851

Figure 10

Complete insulating the throat. Impale insulation, cut pins to correct length, install caps and strip the top and bottom tape.



Figure 11

Where curved surfaces are encountered and the Joint Sealing Tape must be notched to conform to the curvature, cut an additional length of tape to half width and apply over the notched tape surface. This will yield a neater finished appearance and improve adhesion in these areas.



Figure 12

Completed insulation of rectangular duct.



OWENS CORNING
FIBERGLAS

OWENS-CORNING FIBERGLAS CORPORATION
Mechanical Products Division
Fiberglas Tower, Toledo, Ohio 43659

375059

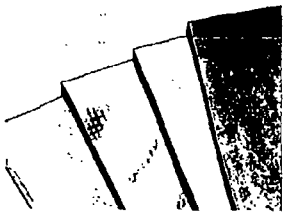
Pub. No. 5-IN-5540 Litho U.S.A. March 1977

OWENS CORNING
FIBERGLAS

Commercial D.9
Industrial D.38
August, 1970

Industrial Insulation 700 Series

A highly versatile group of Fiberglas insulating boards designed to insulate ductwork and equipment operating at temperatures up to 450F.



uses

The 700 Series boards have been designed primarily to insulate heating and air conditioning ducts, ovens, tanks, boilers, hot water generators and other hot equipment.

type 700 — a low cost flexible material suitable for insulating factory-fabricated metal panels and for packing into irregular spaces

type 701 — A lightweight resilient insulation, in board form, used on vessels having irregular surfaces where the exterior finish is supported by welded studs, pins or other mechanical attachments

type 702 — More rigid than 701 and is recommended for use on equipment and ductwork subject to maximum maintenance and construction abuse

type 703 — A semi-rigid board recommended for use on equipment, vessels and air conditioning ductwork.

description

Fiberglas * 700 Series Industrial Insulations are made of inorganic glass fibers pre-formed into semi-rigid to rigid rectangular boards of varying densities. The series consists of Type 700, 701, 702, 703, 704 and 705. Each type has specific thermal and physical characteristics which makes it suitable for the uses described. Type 703, 704 and 705 are available with a variety of factory-applied vapor-barrier facings to prevent condensation on cold surfaces and to provide a neat finished appearance. Fire Retardant Facings are available.

type 704 — A rigid board recommended for use on heating and air conditioning ductwork in exposed areas where sharp, true corners and smooth surfaces are desired.

type 705 — A rigid board with very high strength characteristics for use on chillers, hot and cold equipment, heating and air conditioning ductwork where greater abuse resistance and good appearance is required.

benefits

lower operating costs — the exceptional thermal efficiency of Fiberglas 700 Series Insulations lowers operating costs

end-use tailored — a variety of densities and facings offers a selection of products to meet specific performance and economic requirements.

continuous in-place performance — 700 Series resists damage, maintains structural integrity and efficiency. Thickness stays uniform.

neat, finished appearance — the foil-like characteristics of the heavier density 703, 704 and 705 products provide neat square corners. The factory-applied facings present an attractive finished appearance.

fire safe — Fiberglas is inherently fire safe. The unfaced boards and the Aluminum Foil Faced 703, 704 and 705 have UL Flame Spread ratings of less than 25.

*Trademark Registered Owens Corning Fiberglas Corporation

375059

Performance characteristics

sound absorption coefficients (2" thick @6 mounting)

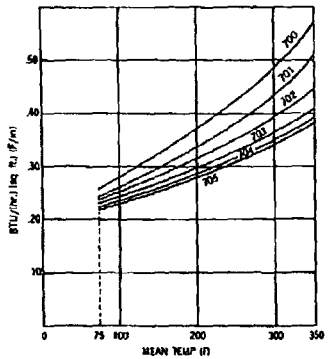
TYPE	125	250	500	1000	2000	4000	NRC
701	.34	.70	.96	.97	.86	.83	.87
702	.28	.77	.96	.98	.87	.87	.89
703	.32	.74	.97	.98	.87	.85	.89
704	.27	.79	.98	.99	.88	.86	.91
705	.48	.82	.97	.99	.90	.86	.92

size and density

Type	Density (pcf)	Thickness (in ½" increments)	Compressive Strength (psi at 10% deformation)	Standard Size	Therm. Cond. @ 75F Mean Temp.
700	1.08	1"—4"	3†		0.260
701	1.58	1"—4"	4.5†		0.242
702	2.25	1"—3"	9.5†	24" x 48"*	0.235
703	3.00	1"—2"	100		0.230
704	4.20	1"—2"	200		0.230
705	6.00	1"—2"	350		0.220

*For special applications, boards up to 48" x 96" are available. †After compression packaging.

thermal conductivity



moisture absorption	less than 0.2% by volume
bacteria and fungus resistance	does not breed nor promote
odor	odorless
humidity and temperature effect	cyclic conditions will not cause spalling or crumbling
corrosion	does not accelerate corrosion of copper, steel or aluminum.

facings

Type 703, 704 and 705 are also available with the following factory applied vapor barrier facings:

FF—.0025 aluminum foil (UL Rated)
FRK—Foil-reinforced kraft (available UL Rated if specified in order)
SF—Duplex Laminated kraft
COATED—either clear or black

fire hazard classification

	unfaced (700, 701, 702)	(703, 704, 705)	foil-faced (700, 704, 702)
flame spread	10-20	15	15-20
fuel contributed	10-15	15	20-25
smoke developed	0-20	0	0

(compared to untreated Red Oak as 100)

application recommendations

Type 700, 701, 702 — Lightweight unfaced flexible insulations in board form for use on vessels having irregular surfaces where the exterior is supported by welded studs or stiffeners and not by the insulation itself. The products are self-supporting but are generally secured with mechanical fasteners and protected by sheet metal.

Type 703, 704, 705 — These board insulations are normally impaled on welded pins on flat surfaces. They are cut in segments and bonded in place on irregular surfaces. Unfaced boards are normally finished with reinforced insulating cement or weatherproof mastic. Faced boards, with joints taped to provide a continuous vapor barrier, may be left unfinished or may be canvas jacketed.

recommended thickness — heated equipment

(80F ambient air)

Surface Temp.	Type 700 RT	Type 700 HL	Type 700 ST	Type 703 RT	Type 703 HL	Type 703 ST	Type 704 RT	Type 704 HL	Type 704 ST
150	1½	11	87	1½	10	86	1½	10	86
250	2	24	95	2	21	93	2	20	92
350	3	79	98	2½	31	99	2½	30	98
450	3½	40	105	3	40	105	3	39	104

RT — recommended economic thickness, inches.
HL — heat loss (Btu/ft²-hr.).
ST — surface temperature (F).

thickness to prevent condensation

cold ducts and equipment

The following chart indicates the recommended thickness of Type 703, 704, 705 Faced Duct insulation for installation on cold air ducts at various temperature differences (duct to air). Also shown are values for heat gain and approximate maximum relative humidity allowable.

Temperature Difference	Recommended Thickness (inches)	Heat Gain Btu/ft²-hr	Permissible Relative Humidity
20	½	5.1	80%
25	½	6.4	81%
30	1	6.1	83%
35	1	7.1	85%
40	1½	5.7	90%
45	1½	6.3	89%
50	2	5.4	89%

specification compliance

HH-I-558a, Form A, Class 1.	702, 703**, 704, 705
HH-I-558a, Form A, Class 2.	702**, 704, 705
HH-I-558b, Form B, Type I, Class 2.	700, 701, 702
Navy Bureau of Yards and Docks, 1971	703**, 704, 705
Corps of Engineers, C.E.—201.08, .11 thru .17	703**, 704, 705

**Type 703 is a specialty product for economic value certification of compliance to the above Federal Specification is required. Available plain as listed for use on hot or cold equipment and for all remaining purposes.

limitations

Industrial Insulation 700 series, plain, should not be used on surfaces operating at temperatures above 450F. Types 703, 704, 705 faced products should not be used on surfaces operating at temperatures greater than 250F except that FF may be used at a maximum thickness of 2½ inches up to 450F.

caution

Owens-Corning Fiberglas insulations are to be applied only with approved adhesives, mastics and mechanical fastening devices as published in Accessory Materials List, Pub. No. 4-MI-3400. Owens-Corning Fiberglas accepts no responsibility or liability for the performance of materials other than those listed unless approved in writing by O-CF Testing Laboratories.

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OWENS-CORNING FIBERGLAS CORPORATION
Mechanical Products Division
Fiberglas Tower, Toledo Ohio 43601

375069

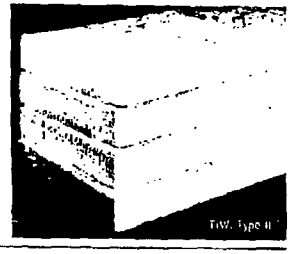
Pub. No. 1-IN-2613-M Litho in U.S.A. August 1976

OWENS/CORNING
FIBERGLAS

Thermal Insulating Wool (TIW) Types I & II

Resilient, lightweight, inorganic insulation for applications up to 1000 F.





uses

TIW, Type I is used in applications requiring a lightweight insulation such as in panel systems, flexible wrap, industrial ovens, or surfaces having irregularities. It's low compressive strength does not make it suitable for use as a base wool for metal mesh blankets.

TIW, Type II is especially suitable for use in metal mesh blankets, and for use on boilers, vessels and many other types of industrial equipment operating at temperatures up to 1000 F. It may also be used in panel systems for precipitators ducts and breechings where more compressive strength than Type I is needed

description

TIW, Type I and II are off-white to light tan, non-combustible wool with long, resilient, inorganic glass fibers bonded with a thermosetting resin. TIW, Type I is available in batts or rolls, while TIW, Type II comes in batts only.

benefits

Lowers Operating Costs – the low K factor of Fiberglas* Thermal Insulating Wool can substantially lower fuel costs by reducing heat loss, and helps develop more comfortable working conditions in equipment rooms.

Lowers Installation Costs - larger blankets cover greater areas reducing installation cost. No tedious block-by-block hand lay-up. No drilling for studs. Type II blankets are easily impaled over welded studs or pins with speed washers or may be held in place with wire ties, metal lath or tagging.

Dimensionally Stable will not shrink, rot or slump.

Non-Corrosive – inorganic fibers of Fiberglas TIW Type I and II, will not cause or accelerate corrosion of any metal. It cannot cause stress corrosion cracking of stainless steel.

Moisture Resistance Fiberglas TIW Type I and II do not absorb moisture. If the insulation becomes wet, it dries out rapidly when exposed to dry air, and without any residual loss of integrity or thermal efficiency.

Fire safe – glass fibers will not burn or support combustion.

*Trademark Registered Owens-Corning Fiberglas Corporation

375083

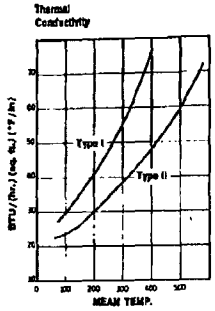
Performance characteristics

	Type I	Type II
Moisture absorption % by volume	0.1% or less	0.2% or less
Temperature limit	1000 F	1000 F
Bacteria and fungus resistance	Does not breed or promote	
Odor	Substantially odorless	

Specification compliance:

TIW, Type I — HH-I-558a Form B — Blankets and Felts, Flexible Type I, Class B

TIW, Type II — HH-I-558a Form B — Blankets and Felts, Flexible Type I, Class 7 & 8
Mil-I-2818 B — Insulation Blanket, Thermal Fibrous Mineral (Requires waiver on ignition loss)



Sizes

TIW, Type I
Standard Roll Sizes
Width - 24" or 36"
Thickness 1" 2" 3" 4"
Lengths 78' 75' 52' 38'
Note: MTO thicknesses are available in ½" increments
MTO widths are available 12", 18", 24" and 72"

TIW, Type II
Standard Batt Size
24" x 48"
24" x 96"
Made-to-Order
Width -- 10" (min) to 36"
Length - 10" (min) to 117"
Thickness -- 1"-3" (½" increments)

Recommended Thicknesses

Recommended thickness, heat loss, efficiency and surface temperature data are provided for the various Commercial, Power and Process industries so that the design engineer can better select the thickness required for his specific job conditions. On outdoor work recommended thickness should be increased at least ½ inch to compensate for wind conditions.

TIW, Type I

Operating Temperature	(Ambient Air 80F) RT	HL	ST
500	4	55	114
600	5	84	119
700	6	75	126
800	7	90	135
900	8	105	145
1000	8.5	131	160

RT — recommended thickness (inches)
HL — heat loss (Btu/hr/sq. ft.)
ST — surface temperature (degrees F)

TIW, Type II

Operating Temperature	(Ambient Air 80F) COMMERCIAL RT	HL	ST	POWER RT	HL	ST	PROCESS RT	HL	ST
200	7.5	35	102	1.5	21	91	1.0	26	93
300	1.5	38	103	2.0	30	95	1.5	37	99
400	2.5	38	103	2.5	39	100	2.0	47	106
500				3.0	47	104	2.5	58	109
600				3.5	55	108	3.0	68	114
700				4.0	64	112	3.5	78	120
800				5.0	74	117	4.0	90	125
900				5.5	83	122	4.5	101	131
1000				6.0	94	127	5.0	114	137

OWENS-CORNING FIBERGLAS CORPORATION
Industrial and Commercial Construction Materials Division
Fiberglas Tower, Toledo, Ohio 43601

Pub. No. 1-UN-3035-A Litho in U.S.A. Oct. 1970

375065

OWENS CORNING FIBERGLAS

Plumbing Systems 1.8.6
Mechanical Equipment 3.8.2.4
Air Handling Systems 4.8.10.11
March, 1972

Fiberglas 25* ASJ (ALL SERVICE JACKET)

Duct and equipment insulation system -60° to -450°F

application specification

Figure 1 — Tools and accessory items:

A. Scissors
B. Nylon sealing tool
C. Stanley knife
D. Screw driver
E. End-Cutting nippers
F. Pre-finished fastener caps
G. OCF Joint Sealing Tape, ASJ (Pressure Sensitive, U.L. labeled)
H. OCF Filling Mastic, Type C (U.L. labeled)



Figure 2

Attach pins to surface of duct and locate them not less than 3" in from each edge or corner of the board. For a neat job, keep pins in straight lines. Pin spacing along the duct should not be greater than 2" centers. On surfaces where cross breaking is used for stiffening, additional pins may be needed to hold the insulation tightly against the surface.

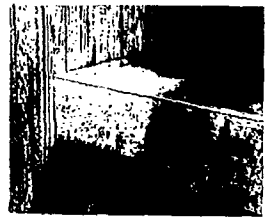


Figure 3

Cut Fiberglas 25 insulation to dimension and impale on pins. Apply pressure on facing in the area of the pin penetration. For elbows, cut pie-shaped pieces for top and bottom. Make sure insulation fits tightly at the seams before inserting.



*Fiberglas (Reg. U.S. Pat. Off.) and "25" are trademarks of Owens-Corning Fiberglas Corporation.

375065

Figure 10

Complete insulating the throat. Impale insulation, cut pins to correct length, install caps and strip the top and bottom flaps.



Figure 11

Where curved surfaces are encountered and the Joint Sealing Tape must be notched to conform to the curvature, cut an additional length of tape to half width and apply over the notched tape surface. This will yield a neater finished appearance and improve adhesion in these areas.



Figure 12

Completed insulation of rectangular duct.



OWENS-CORNING
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OWENS-CORNING FIBERGLAS CORPORATION
Mechanical Products Division
Fiberglas Tower, Toledo, Ohio 43659

375C1.5

Pub. No. 3-IN 9540 Litho U.S.A. March 1977

Prices

[redacted]

Duct Wrap Insulations

No. IR 7-34
Page 1 of 1
Date 10/1/71
Supersedes 1/1/71

All sales are subject to Owens-Corning Fiberglas Corporation general terms and conditions of sale.

PAYMENT TERMS: 1% 10th Prox., in dollar amount shown on Invoice, Net 30th Prox.

SHIPPING TERMS: Ex Warehouse: F.O.B. Warehouse, frt. Allowed at sellers routing, based on $200.00
Ex Factory: Minimum order. Frt. Extra on orders below $200.00 minimum.

FACED FLEXIBLE DUCT INSULATIONS
Pink Standard Duct Wrap

CPU DET

TYPE	FACING	THICKNESS	PRICES PER MSF Ex Factory TL	Ex Warehouse Picked-Up	Ex Warehouse Delivered	WIDTH	LENGTH
Foil	.002 Aluminum Foil (UL Listed)	1	$ 32.25	$ 55.00	$ 59.60	48" w/ 1-2" Tab	100'
		1-1/2	54.40	68.00	76.50		100'
		2	77.00	88.00	93.40		50'
ZD 75	Foil Reinforced Kraft (UL Listed)	1	69.35	73.00	75.90	48" w/ 1-2" Tab	100'
		1-1/2	83.60	88.00	92.55		100'
		2	97.85	103.00	110.00		50'

PLAIN FLEXIBLE DUCT INSULATIONS

THICKNESS	PRICES PER MSF .6 Lb. Density Ex Fact TL	Ex Warehouse F-U	Ex Warehouse Del'd	.75 Lb. Density Ex Fact TL	Ex Warehouse F-U	Ex Warehouse Del'd	1.0 Lb. Density Ex Fact TL	Ex Warehouse F-U	Ex Warehouse Del'd	STD. SIZES PACKAGED IN POLYETHYLENE TUBES WIDTH	LENGTH
1-1"	$——	$——	$——	$——	$——	$——	$29.50	$31.00	$33.75	24", 36"*	200'
1"	34.55	36.60	39.60	44.60	46.60	51.10	58.90	61.90	67.90	48" or	100'
1-1/2"	51.80	54.30	59.80	66.00	69.30	76.50	88.35	92.85	101.85	72"	100'
2"	69.10	72.60	75.60	91.85	96.35	104.85	117.80	123.80	135.30		50'

* 36" in 1/2" or 1" Thickness available slit to 5" or 12" widths.

FACING AND-ON CHARGES
ALL ITEMS PRICED FROM THIS TABLE ARE NTO

To Price faced insulation add the Facing Charge of the Applicable facing from the table below to the price of the desired insulation from the price table for Plain Flexible Insulation above.

FACING	FACING CHARGES PER MSF 24" or 48" - No Tabs Ex Factory TL	Ex Warehouse Picked Up	Ex Warehouse Deld.	48" Wide 1-2" Tab Ex Factory TL	Ex Warehouse Picked Up	Ex Warehouse Deld.	36" Wide 1-2" Tab Ex Factory TL	Ex Warehouse Picked Up	Ex Warehouse Deld.
*VAF-3E White	$75.98	$87.44	$92.10	$79.15	$91.09	$96.00	$80.23	$92.34	$97.40
*.002 Alum Foil	27.56	31.73	33.40	28.71	33.04	34.74	29.10	33.50	35.25
-25*Foil Reinf. Kraft	39.37	45.31	47.70	41.01	47.20	49.70	41.57	47.85	50.25

MINIMUM RELEASE QUANTITY: Ex Warehouse: One Roll of any one item.
Ex Factory: One Roll of any one item in a full TL of Fiberglas Products.

* U.L. Listed: U.L. 25 Flame Spread labels available.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

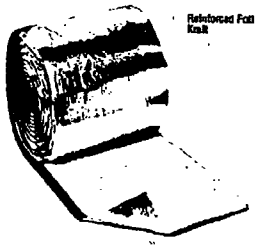
OWENS-CORNING FIBERGLAS SUPPLY & CONTRACTING DIVISION
592 W. SWEDESFORD ROAD (Route 202 South) BERWYN, PA. 19312
215-Suburban 647-2700 Phila. GR7-2023
6601 MORAVIA PARK DRIVE BALTIMORE, MD. 21237
301-488-8200 or 301-485-0010

* Trademark of Owens-Corning Fiberglas Corporation

OWENS CORNING
FIBERGLAS

Faced Duct Wrap Insulation—RFK 75

Faced duct wrap insulation for concealed and exposed hot, cold, or dual-temperature air handling systems



uses

Fiberglas* Faced Duct Wrap is used to insulate residential and commercial air conditioning or dual-temperature ducts operating at temperatures from 40F to 250F.

description

Fiberglas Faced Duct Wrap insulation is an inorganic blankets of pink glass fiber with a factory-applied Reinforced Foil Kraft facing and one 2" flange. Uniform quality of the finished product is assured by combining the facings with the insulation as it is manufactured. The facing is firmly bonded and inspected continuously during manufacture.

benefits

Low operating costs—low k factor of .28 at 75F mean temperature (1" thick material) and felt-thick resilience means less heat loss or gain. Systems operate efficiently. Air is delivered at design temperature.

No water-stained ceilings—vapor barrier facings have low perm ratings to stop moisture vapor from condensing on the cold duct surface.

An insulation to fit every job—hot, cold, dual temperature exposed or concealed, tailored to economic and performance requirements.

Damage resistant—Fiberglas Duct Wrap insulations are tough and resilient. They resist damage in shipment and after they are installed. The RFK vapor barrier facing is reinforced with strong glass fibers to resist puncture and tearing during installation.

*Trademark Registered Owens-Corning Fiberglas Corp.

Application specification: Insulation shall be wrapped tightly on the duct work with all circumferential joints butted and longitudinal joints overlapped a minimum of 2". Adhere insulation to metal with 4" stripes of insulation bonding adhesive* at 8" O.C. Additionally secure insulation to the bottom of rectangular duct work over 24" wide with mechanical fasteners at not more than 18" O.C. On circumferential joints, the 2" flange of the facing shall be secured using 9/16" flare-door staples applied 6" O.C. and taped with minimum of 3" wide foil reinforced kraft Tape. On longitudinal joints, the overlap shall be secured using 9/16" flare-door staples applied 6" O.C. and taped with minimum 3" wide foil reinforced kraft tape. All pin penetrations or punctures in facing shall also be taped.

In exposed applications cover all joints with 3" wide Foil Reinforced Kraft tape.

*Refer to Accessory Materials — List for suggested manufacturers of mastics, adhesives and other accessory items. Publication No. 4-IN-3430.

375070

Performance characteristics

Property	Test Method	Specification	Tolerance
Fire Hazard Classification:	ASTM-E84-68	Flame Spread, Maximum 75 Smoke Developed, Maximum 20	
Thermal Conductivity: @ 75F mean Btu/sqft/hr F/in	ASTM-C168-61 61-05F)	1", .26, 1½" & 2", .30 It values (insulation only) 1", 4, 1½", 6 2", 7.00	±.02
Odor:		Commercially odorless	
Corrosion:		Will not accelerate corrosion in aluminum or galvanized steel facing	
Vapor Permeability:	P-02A	RFK— Not to exceed 0.05 perm	

Physical characteristics:

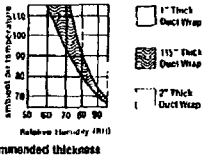
Thickness:	D-01Aa	1", 1½", 2"	±5/16" – 1/16"
Width:	D-03A	Std. 48" (24" available on M.T.O. basis)	±¼"
Length:	D-03A	1" & 1½" std. 100', 2" std 75'; M.T.O. lengths in 5' increments; 1", 1½" max 80' max 125'; 2" max 50' max 80'	
Flanges:	Steel rule	One 2" flange	±½"

Moisture absorption: less than 0.2% by volume, 96 hrs. at 120F and 95% R.H.

Bacteria and fungus resistance: does not breed nor sustain bacteria or fungus

Condensation control
To determine thickness to prevent condensation at various ambient temperature and humidity: (Based on compressed thickness of installed material, air at 60 F in duct moving at 1200 FPM).

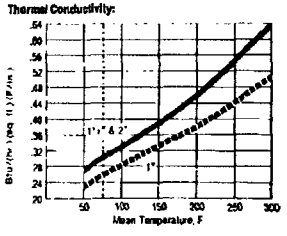
1. Select maximum expected Relative Humidity (RH) on lower scale, and,
2. Move up vertically until that line intersects the expected maximum ambient air temperature;
3. Select the thickness when the intersection point falls within the shaded areas.



Recommended thickness
Owens-Corning Fiberglas recommends a full 2" thickness for protection against excessive heat loss or gain. This is because flexible blanket insulations may be compressed during installation. This effects the thermal performance.

Selection of insulation thickness and application are the responsibility of the contractor and engineer.

Thermal Conductivity:



Suggested specification:
All heating, cooling, dual temperature or ventilating supply and return air ducts shall be insulated with ___ inches thick of Faced Duct Wrap RFK-75 as manufactured by Owens-Corning Fiberglas.

Limitations
Fiberglas Faced Duct Wrap insulation should not be used on duct systems subject to temperatures in excess of 250F. It should not be exposed to weathering or mechanical abuse without proper protection. It should not be used on the inside of ducts. All values given are subject to normal manufacturing and testing tolerance.

OWENS/CORNING FIBERGLAS

OWENS-CORNING FIBERGLAS CORPORATION
Mechanical Products Division
Fiberglas Tower, Toledo, Ohio 43659

Pub. No. 1-MB-3418 Litho in U.S.A. July 1971

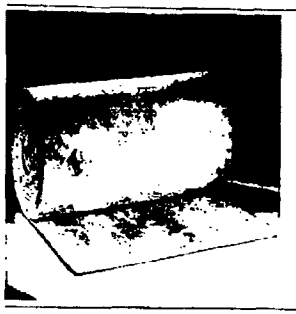
375071

OWENS CORNING FIBERGLAS

Commercial D.16
February 1976

Plain Pink Duct Wrap Type P — (unfaced)

For external application on all hot air ducts not requiring a facing for appearance or painting



uses

Fiberglas* unfaced Pink Duct Wrap is designed to insulate exteriors of both concealed and exposed hot air ducts. It is intended for installation on ducts operating at temperatures up to 250F.

description

Fiberglas Pink Duct Wrap is an unfaced insulating blanket of fine inorganic glass fibers. The average low "k" at 75F varies from 0.23 to 0.33, depending on density. Its light weight, flexibility and toughness make this insulation an easy and time-saving material for workmen to apply even in limited space. Densities range from ½ lb. to 3 lb./cu. ft.

benefits

Low operating cost—low k factor of .26 @ 75 F mean temperature (Type 100P). Full-thick resilience means less heat loss. Systems operate more efficiently. Air is delivered at design temperature.
All purpose insulation—ideally suited for all hot ducts not requiring a facing for appearance or surface finish. Tailored primarily for economical insulation of concealed hot air ducts, rectangular or round.
Tough and resilient—Fiberglas Pink Duct Wrap insulation is tough and resilient. It resists damage in shipment, installation and after it is installed.
Striped for density identification—this product is striped to identify the density of insulation being installed: 50P two stripes, 75P one stripe, 100P to 300P no stripes.

*Trademark Registered Owens-Corning Fiberglas Corp.

375072

Performance characteristics

Property	Test Method	Specification	Tolerance
Fire Hazard:	ASTM-E84	Flame Spread, Max. 25 Smoke Developed, Max. 50	
Parting Strength:	B-02A	Type / lbs/GM 50P 1.35 75P 1.50 100P 1.75 150P 1.90 200P 2.05 250P 2.30 300P 2.45	±0.30
Odor:		Commercially odorless	
Corrosion:		Will not accelerate corrosion of aluminum or galvanized steel	
Bond Strength (psf):	B-06B	50P, 14; 75P, 23; 100P, 27; 150P, 45; 200P, TBD; 250P, TBD; 300P, TBD	
Thermal Conductivity: @ 75 F mean Btu/hr/sq ft/F/in	ASTM-C177 H-05F	50P, .33; 75P, .31; 100P, .28; 150P, .26; 200P, .24; 250P, .23; 300P, .23;	±.01
Physical characteristics			
Density & Thickness: (1½" max)	D-01A for thickness D-01C for density	type / pcf / specification 50P ½ 1" thru 4" 75P ¾ 1" thru 4" 100P 1 1½" thru 3" 150P 1½ 1½" thru 2" 200P 2 1½" thru 1½" 250P 2½ 1½" thru 1" 300P 3 1½" only	+½"–0"
Width:	D-03A	Std 24", 36", 48", 72" other width 6" to 72" available on M.T.O. basis	±1½"
Length:	D-03A	Min 25', max dependent on thickness and density 50P, 50' to 400' (depending on thickness) 75P, 50' to 400' (depending on thickness) 100P, 50' to 400' (depending on thickness) 150P, 50' to 200' (depending on thickness) 200P, 50' to 200' (depending on thickness) 250P, 50' to 100' (depending on thickness) 300P, 50' to 100' (depending on thickness)	+12"–0"

Recommended thickness
Owens-Corning Fiberglas recommends a full 2" thickness for protection against excessive heat loss or gain. This is because flexible blanket insulations may be compressed during installation. This affects the thermal performance.

Selection of insulation thickness and application are the responsibility of the contractor and engineer.

Limitations
Fiberglas Pink Duct Wrap insulation should not be used on duct systems subject to temperatures in excess of 250F. It should not be exposed to weathering or mechanical abuse without proper protection. It should not be used on the inside of ducts. All values given are subject to normal manufacturing and testing tolerance.

Specification compliance:
HH-I-558a Form B, Type I Class 6
MIL-I-22023C Types I and II

Suggested specifications:
Insulate supply and return heating duct as shown with inches thick of Type (50P) (75P) (100P) (150P) (200P) (250P) (300P) Pink Duct Wrap as manufactured by Owens-Corning Fiberglas.

Application recommendations:
Hot Air Ducts—Fiberglas Pink Duct Wrap insulation should be applied with a fire resistant adhesive in 4" wide strips on 8" centers. Insulation shall be additionally secured to the bottom of rectangular ducts over 24" wide with mechanical fasteners spaced at 18" o.c. End joints and longitudinal joints shall be overlapped a minimum of 2" and wrapped with 18 gauge galvanized wire ties at 18" o.c.

OWENS/CORNING FIBERGLAS

OWENS-CORNING FIBERGLAS CORPORATION
Industrial and Commercial Construction Materials Division
Fiberglas Tower, Toledo, Ohio 43601

Pub. No. I-MS-4780-A Litho in U.S.A. February 1970

Guide to selection of *foster* Finishes

for use with Glass/Mineral Fiber Insulation

Top Performance Reference Guide

Select:

Sealfas G·P·M

(1) Superior weather and chemical resistance
(2) Strongest flexibility and elongation properties exposed to weathering
(3) Life expectancy increased considerably
(4) Underwriters' Laboratories labeled and listed — meets NFPA 90A requirements
(5) Non-flammable in wet state
(6) Maximum service temperature limits
(7) Year round application — may be applied as low as 10F.
(8) Minimum shrinkage — less material needed
(9) Wide range of colors

Select:

Monolar Hasilc

(1) Superior weather and chemical resistance
(2) Excellent vapor barrier properties
(3) Strong flexibility and elongation to offer maximum resistance to movement
(4) Maximum service temperature limits of colors 20F. to 250F.
(5) Low dry film flame spread
(6) Unusual film strength in one coat application
(7) Wide range of colors.

☆ indicates that the product being evaluated can be supplemented by additional treatment to offer the performance required for the service noted.

The coverages indicated on Outdoor and Heavy-Duty Service specifications are recommended for Heavy-Duty Service indoors.

G·P·M

WARM AIR DUCTS

			FLEXIBLE	RIGID
Rectangular	Indoor	Exposed	J,K	J,K
		Concealed	K,L	K,L
	Outdoor & Heavy Duty	Exposed	B,D,E,X	A,C,E,X
Circular	Indoor	Exposed	J,K	J,K
		Concealed	K,L	K,L
	Outdoor & Heavy Duty	Exposed	A,C,E,X	A,C,E,X

G·P·M

AIR CONDITIONING & DUAL TEMPERATURE DUCTS

			FLEXIBLE	RIGID
Rectangular or Circular	Indoor	Exposed	K,N,P	K,N,P
		Concealed	K,N	K,N
	Outdoor & Heavy Duty	Exposed	H-a,H-b,X V,W,Y	H-a,H-b,X V, W,Y

MONOLAR

G·P·M

PIPING AND FITTINGS

			COLD SERVICE			HOT SERVICE
			under 33 F	33 F to 50 F	50 F & above	100 F & over
Bare or Insulating Cement	Indoor	Exposed	N,Y	N,K☆	K,P,N	K,J
		Concealed	N,Y	N,L☆	K,N	N,L
	Outdoor & Heavy Duty	Exposed	H-a,H-b G,V,W	H-a,H-b G,V,W	H-a,H-b, X V	A,C,E,X

MONOLAR

G·P·M

EQUIPMENT & VESSELS

		FLEXIBLE			RIGID		
		100 F & over	50 F to 100 F	50 F & below	100 F & over	50 F to 100 F	50 F & below
Bare or Insulating Cement	Indoor	A,C,J,K	H-a,H-b,X K,P	H-a,H-b,Y K,V	A,C,J,K	H-a,H-b,X V,P,K	H-a,H-b,Y N,V
	Outdoor & Heavy Duty	B,D,E,X	H-a,H-b,X V,W	H-a,H-b,Y G,V,W	B,D,E,X	H-a,H-b,X V,W,G	H-a,H-b,Y G,W,V
Insulating Cement Over Metal Mesh Blankets	Indoor	B,D					
	Outdoor & Heavy Duty	B,D					

MONOLAR

3507

See reverse side for Foster Adhesives

GUIDE TO PROPERTIES OF foster FINISHES

☆ Indicates optional protective properties and/or color selections . . . see Guide Specification.

Guide Specification	Product Code	Product Name	FIRE/SAFETY: Underwriters' Laboratories Listed	FIRE/SAFETY: Flame Spread per ASTM E-162	FIRE/SAFETY: Flash Point °F	FIRE/SAFETY: Theoretical Limit % by Volume Solvent Vapors, gas	PERFORMANCE: Chemical Resistance to Fumes of: Acid & Alkali	PERFORMANCE: Solvent	PERFORMANCE: Service Temperature Limits °F	PERFORMANCE: Abrasion Resistance	PERFORMANCE: Water Vapor Transmission (Perms)	PERFORMANCE: Color	APPLICATION: Typical Spray Build, Mils	APPLICATION: Application Temperature Limits °F	APPLICATION: Type of Substrate	APPLICATION: Primer Coat Required	APPLICATION: Type of Vehicle
ASPHALTIC																	
A	60-80	Safetee H. I. Mastic	Yes		None	No Limit	F	P	0 to 200	G	3.0	Black☆	T,S	40 to 100	Mast-A-Fab	Yes	Water
B	60-80	Safetee H. I. Mastic	Yes		None	No Limit	F	P	0 to 200	G	3.0	Black☆	T,S	40 to 100	Hex Mesh	Yes	Water
C	60-07	H. I. Mastic		135	None	No Limit	P	P	0 to 200	G	3.0	Black☆	T,S	40 to 100	Mast-A-Fab	Yes	Water
D	60-07	H. I. Mastic		135	None	No Limit	F	P	0 to 200	G	3.0	Black☆	T,S	40 to 100	Hex Mesh	Yes	Water
E	60-99	Hilastic		140	None	No Limit	F	P	-20 to 150	G	4.0 to 0.8	Black☆	T,S,B	40 to 100	Mast-A-Fab	Yes	Water
F	60-25,60-26,60-28	C. I. Mastic		145	100	500	G	P	-20 to 200	G	0.00	Black☆	T,S	40 to 100	Mast-A-Fab	No	Solvent
G	60-32, 60-42	C. I. Mastic, Aluminum		60	100	500	P	P	-20 to 175	G	0.00	Aluminum	T,S	40 to 100	Mast-A-Fab	No	Solvent
H-a	65-07, 65-08	Safetee C. I. Mastic	Yes		None	200	G	P	-20 to 200	G	0.00	Black☆	T,S	40 to 100	Mast-A-Fab	No	Solvent
H-b	65-05, 65-06	Fire-Resistive C. I. Mastic	Yes		87	500	G	P	-20 to 200	G	0.00	Black☆	T,S	40 to 100	Mast-A-Fab	No	Solvent
POLYMERIC																	
J	30-70	Lagtone	Yes		None	No Limit	P☆	P☆	-50 to 180	G	3.0	As selected	S,B	40 to 100	Mast-A-Fab	Yes	Water
K	30-36	Sealfas	Yes		None	No Limit	P☆	F☆	0 to 180	F	0.90☆	Cream	S,B	40 to 100	Canvas	Yes	Water
L	81-42w	Lagfas		5	None	No Limit	P☆	F☆	-50 to 180	F	3.0☆	White	S,B	40 to 100	Canvas	Yes	Water
N	30-35, 30-56	Tite-Fit Coatings	Yes		110	500	P	P	20 to 150	P	0.12	White, Gray	S,B	50 to 100	None	No	Solvent
P	30-21	Lagtone, Aluminum		20	None	No Limit	P	F	-50 to 180	G	0.70	Aluminum	S,B	40 to 100	Mast-A-Fab	Yes	Water
Q	30-76☆	White Insulation Coating		25	None	No Limit	P	F	0 to 180	G	3.0	White	S,B	40 to 100	None	Yes	Water
R	57-15☆	Vitect Vinyl		5	85	100	G	G	-20 to 180	G	0.80	As selected	S,B	50 to 100	None	No	Solvent
S	57-61☆	Vitect Epoxy			85	100	G	G	-100 to 250	G	1.0	As selected	S,B	50 to 90	None	No	Solvent
T	30-42☆	Vinyl Vapor Barrier	Yes		85	200	F	P	-20 to 180	P	0.30	White	S,B	40 to 100	None	No	Solvent
U	30-70☆	Lagtone	Yes		None	No Limit	P	F	-50 to 180	G	3.0	As selected	S,B	40 to 100	None	Yes	Water
X	35 - 00	Sealfas G P M	Yes		None	No Limit	F☆	F☆	-20 to 180	G	30/0.5	As selected	T,S,B	10 to 100	Mast-A-Fab	No	Water
ELASTOMERIC																	
V	60-30, 60-60	Fire-Resistive Mastic	Yes		80	200	G☆	P☆	-40 to 200	G	0.00	Dark Brown	T,S	40 to 100	Mast-A-Fab	No	Solvent
W	60-35, 60-65	Fire-Resistive Mastic, Alum.	Yes 60-65		80	200	F	P	-40 to 200	G	0.00	Aluminum	T,S	40 to 100	Mast-A-Fab	No	Solvent
Y	60-36	Monol [illegible]		25	100	200	G	F	-20 to 250	G	0.06	As selected	S,G	40 to 100	None	No	Solvent
Z	60-36, 35-00	Monolar/Sealfas G-P-M			100	200	G	F	-20 to 250	G	0.04	As selected	T,S	40 to 100	Mast-A-Fab	Yes	Solvent Water

Sealfas G P M, Safetee Mastic, Hilastic, C. I. Mastic, Lagtone, Lagfas, Sealfas, Mast-A-Fab, Monolar are trademarks of Benjamin Foster Division

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Guide to selection of *foster* Adhesives

for use with Glass / Mineral Fiber Insulation

ATTACHMENT ADHESIVES

WARM AIR DUCTS

	FLEXIBLE	RIGID
RECTANGULAR (Indoor or Outdoor)	A-1,A-2	A-1,A-4
CIRCULAR (Indoor or Outdoor)	A-1	

AIR CONDITIONING & DUAL TEMPERATURE DUCTS

	FLEXIBLE SEMI-RIGID	RIGID
RECTANGULAR (Faced & Unfaced) (Indoor & Outdoor)	A-1,A-2,A-4	A-1,A-4
CIRCULAR (Faced & Unfaced) (Indoor & Outdoor)	A-1,A-2	

DUCT LINERS

RECTANGULAR LO, MED, HI, VELOCITY	A-3

EQUIPMENT

TANKS AND VESSELS

	FLEXIBLE	RIGID
BARE (Indoor & Outdoor)	A-1,A-2,A-4	A-1,A-4

PIPING

Joint and Fitting Fabrication	A-5

TYPE
A-1. Full Coverage
A-2. 50% Coverage
A-3. Duct Liner
A-4. Clip-on Hanger and Adhesive
A-5. Fitting Fabrication

LAP SEALING ADHESIVES

FACING & JACKETS

FOIL TREATED KRAFT LAMINATES	L-1
TREATED GLASS CLOTH W/PLASTIC FILM	L-2
MOLAR® FACED STANDARD AND VAPOR BARRIER LAMINATES	L-3
ALUMINUM FOIL LAMINATE	L-4
LAGGING CLOTH	L-5

® Registered T.M. of DuPont

See reverse side for Foster Finishes

GUIDE TO PROPERTIES OF *foster* ADHESIVES

PERFORMANCE Guide Specification SUITABLE Guide Specification	PRODUCT CODE	PRODUCT NAME	FIRE/SAFETY Underwriters' Laboratories Listed	Flame Spread by ASTM E-162	Flash Point °F	Threshold Limit Value Air Borne Vapor — ppm	PERFORMANCE Service Temperature Limits °F	Vapor Barrier in Lap Joints	Color	Thermal Conductivity Btu-in	Application Temperature Limits °F
ATTACHMENT ADHESIVES											
	A-1	81-33	Fire-Resistive Adhesive		5	165	200	-50 to 300		Gray	T	20 to 100
	A-1,A-2 A-3	85-25	Duct-Tac Adhesive Black	Yes		25	500	-10 to 180		Black	S,B	40 to 90
A-3		85-10	Spark-Fas Adhesive	Yes		None	500	-20 to 180		Black	S,B	40 to 90
	A-1,A-2 A-3	85-17 85-62	Jac-Tac Adhesive	Yes		None	No limit	-10 to 220		White Black	S,B	40 to 100
	A-1	82-08/09	Kold-Fas Adhesive		40	None	No limit	-50 to 170		Black	T,B	40 to 100
A-4		82-55	Fas-Clip Adhesive		5	55	500	-10 to 180		Red-Brown	T,B	30 to 100
A-5	A-1,A-2 A-3	85-15	Stic-Safe® Adhesive	Yes		25	500	-20 to 200		Amber	S,B	40 to 100
A-1,A-2 A-3		85-20	Spark-Fas Adhesive	Yes		None	500	-20 to 180		Off-White	S,B	40 to 90
LAP SEALING ADHESIVES											
L-3		30-36	Sealfas	Yes		None	No limit	0 to 180	No	Off-White	B	40 to 100
	L-5	81-42w	Lagfas		5	None	No limit	-50 to 180	No	White	B	40 to 100
L-1,L-2 L-4		82-40	Tabfas Non-Flammable		5	None	500	0 to 180	Yes	Amber	B	40 to 90
	L-1,L-2	85-51	Go-Fas	Yes		25	500	-20 to 200	Yes	White	B	18 to 100
	L-1,L-2 L-3 L-4	85-75	Drion Contact Bond Cement Non-Flammable			None	500	0 to 180	Yes	White	B	40 to 90
	L-1,L-3 L-4	82-07	Vapor Barrier Lap Adhesive		5	None	500	0 to 180	Yes	White	B	40 to 90
	L-4	82-31	Tabfas		5	0	200	0 to 180	Yes	Amber	B	40 to 90
	L-1,L-2	85-17 85-62	Jac-Tac Adhesive	Yes		None	No limit	-10 to 220	Yes	White Black	B	40 to 100
	L-1, L-2 L-4	85-15	Stic-Safe	Yes		25	500	-20 to 200	Yes	Amber	B	40 to 100
	L-1,L-2 L-4	85-20	Spark-Fas	Yes		None	500	-20 to 180	Yes	Off-White	B	40 to 90
L-1,L-2 L-3,L-4		82-56	Drion Contact Bond Cement		5	0	200	-20 to 200	Yes	White	B	12 to 90

® Fas-Clip, Sealfas, Lagfas, Spark-Fas, Stic-Safe, Kold-Fas, Jac-Tac, Go-Fas, Clip-On are registered Trade marks of Benjamin Foster Division. Drion, Duct Tac T.M. applied for.

Adhesives

nsulation

GUIDE TO PROPERTIES OF *foster* ADHESIVES

INERS
:TANGULAR
.9, MED. HI. VELOCITY — A-3

ENT
CS AND VESSELS

ARE	FLEXIBLE	RIGID
oor & Outdoor	A-1,A-2,A-4	A-1,A-4

and Fitting Fabrication — A-5

A-1. [illegible]
A-2. Full Coverage
A-3. 50% Coverage
A-4. Duct Liner
A-4. Clipline Hanger and Adhesive
A-5. Fitting Fabrication

				FIRE/SAFETY				PERFORMANCE				APPLICATION				
Recommended Code Specification Suffix(es)	Specification Suffix(es)	PRODUCT CODE	PRODUCT NAME	Underwriters' Laboratories Listing	Flame Spread per ASTM E-162	Flash Point °F	Threshold Limit Value for Solvent Vapor — ppm	Service Temperature Limits °F	Vapor Barrier in Lap Joints	Color	Viscosity Brookfield RVF	Application Temperature Limits °F	Working Time (Minutes)	Produce Satin Finish(es)	Type of Solvents	Approvals
ATTACHMENT ADHESIVES																
	A-1	81-33	Fire-Resistive Adhesive		5	165	200	-50 to 300		Gray	T	20 to 100	2 to 10	No	Solvent	MIL-A-3316 B Class 2
	A-1,A-2 A-3	85-25	Duct-Tac Adhesive Black	Yes		25	500	-10 to 180		Black	S,B	40 to 90	0 to 30	No	Solvent	
A-3		85-10	Spark-Fas Adhesive	Yes		None	500	-20 to 180		Black	S,B	40 to 90	2 to 30	No	Solvent	NFPA 90-A
	A-1,A-2 A-3	85-17 85-62	Jac-Tac Adhesive	Yes		None	No limit	-10 to 220		White Black	S,B	40 to 100	0 to 10	Yes	Water	
	A-1	82-08/09	Kold-Fas Adhesive		40	None	No limit	-50 to 170		Black	T,B	40 to 100	0 to 30	Yes	Water	U.S.D.A.
A-4		82-55	Fas-Clip Adhesive		5	65	500	-10 to 180		Red-Brown	T,B	30 to 100	0 to 5	No	Solvent	
A-5	A-1,A-2 A-3	85-15	Stic-Safe Adhesive	Yes		25	500	-20 to 200		Amber	S,B	40 to 100	0 to 15	No	Solvent	NFPA 90-A
A-1,A-2 A-3		85-20	Spark-Fas Adhesive	Yes		None	500	-20 to 180		Off-White	S,B	40 to 90	0 to 10	No	Solvent	NFPA 90-A U.S.D.A. MIL-A-3316B Class 2
LAP SEALING ADHESIVES																
L-5		30-36	Sealfas	Yes		None	No limit	0 to 180	No	Off-White	B	40 to 100	0 to 10	Yes	Water	MIL-A-3316(C) Class 1 NFPA 90-A
	L-5	81-42w	Lapfas		5	None	No limit	-50 to 180	No	White	B	40 to 100	0 to 10	Yes	Water	U.S.D.A.
L-1,L-2 L-4		82-40	Tabfas Non-Flammable		5	None	500	0 to 180	Yes	Amber	B	40 to 90	5 to 20	No	Solvent	U.S.D.A. MIL-P-15280 MIL-A-3417B, Type III
	L-1,L-2	85-51	Go-Fas	Yes		25	500	-20 to 200	Yes	White	B	15 to 100	0 to 10	No	Solvent	U.S.D.A.
	L-1,L-2 L-3 L-4	85-75	Orion Contact Bond Cement Non-Flammable			None	500	0 to 180	Yes	White	B	40 to 90	3 to 20	No	Solvent	
	L-1,L-2 L-4	82-07	Vapor Barrier Lap Adhesive		5	None	500	0 to 180	Yes	White	B	40 to 90	2 to 5	No	Solvent	
	L-4	82-31	Tabfas		5	0	200	0 to 180	Yes	Amber	B	40 to 90	Contact Bond	No	Solvent	
	L-1,L-2	85-17 85-62	Jac-Tac Adhesive	Yes		None	No limit	-10 to 220	Yes	White Black	B	40 to 100	0 to 10	Yes	Water	
	L-1, L-2 L-4	85-15	Stic-Safe	Yes		25	500	-20 to 200	Yes	Amber	B	40 to 100	2 to 10	No	Solvent	NFPA 90-A
	L-1,L-2 L-4	85-20	Spark-Fas	Yes		None	500	-20 to 180	Yes	Off-White	B	40 to 90	2 to 10	No	Solvent	NFPA 90-A, U.S.D.A. MIL-A-3316B Class 2
L-1,L-3 L-3,L-4		82-56	Orion Contact Bond Cement		5	0	200	-20 to 200	Yes	White	B	12 to 90	5 min to 5 hrs	No	Solvent	

*Fas Clip, Sealfas, Lapfas, Spark-Fas, Stic-Safe, Kold-Fas, Jac-Tac, Go-Fas, Clip-Fas are registered Trade-marks of Resinous Foam Division. Orion, Duct-Tac T.M. applied for

See reverse side for Foster Finishes

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OWENS/CORNING FIBERGLAS

O-C Flexible Tubing and Sheet Insulation

Prices

No. IN-S-84
Page 1 of 2
Date 4/1/70
Supersedes 9/15/70

All sales are subject to Owens-Corning Fiberglas Corporation general terms and conditions of sale.

PAYMENT TERMS: 1% 10th Prox., in dollar amount shown on invoice, Net 30th Prox.

SHIPPING TERMS: Ex Warehouse: F.O.B. Warehouse, Frt Allowed at sellers Routing. Bases on $200.00 minimum order. Frt. Extra on orders below $200.00 minimum.

CONTAINER SIZE					NET PRICES PER LINEAL FOOT				PACKAGING DATA			
					Insert Loose		EX WAREHOUSE		O. Location		Continuous Length	
Nominal Wall Thickness	I. D. unless noted	Copper Tube Size	Iron Pipe Size	Sterling Size	Blk. Tubing	White Tubing	Blk. Tubing	White Tubing	Lin. Ft. Per Ctn.	Approx. Lbs./Ctn.	Lin. Ft. Per Ctn.*	Approx. Lbs./Ctn.
3/16"	3/8"	1/4"	----	----------	$ .067	$ .070	$ .073	$ .077	150	20	150	21
	1/2"	3/8"	1/4"	----------	.071	.074	.076	.077	720	19	500	21
	5/8"	1/2"	3/8"	----------	.077	.081	.084	.089	600	21	600	26
	3/4"	5/8"	---	---	.084	.088	.092	.096	486	21	575	22
	7/8"	3/4"	1/2"	---	.091	.095	.100	.104	336	15	550	21
	1 1/8"	1"	3/4"	---	.108	.110	.116	.121	216	13	500	22
3/8"	3/8"	1/4"	---	1 3/8"	.102	.107	.112	.117	450	21	600	33
	1/2"	3/8"	1/4"	1 3/8"	.112	.118	.123	.130	350	23	650	38
	5/8"	1/2"	3/8"	1 5/8"	.129	.135	.142	.148	270	21	600	35
	3/4"	5/8"	---	1 5/8"	.137	.144	.150	.158	240	24	475	40
	7/8"	3/4"	1/2"	1 1/2" IPS	.146	.153	.160	.168	210	22	450	38
	1"	7/8"	---	1 1/2"	.155	.163	.170	.179	150	18	300	31
	3/4" IPS	---	3/4"	2 1/8"	.157	.166	.172	.177	150	18	300	31
	1 1/8"	1"	---	2 1/8"	.161	.169	.177	.185	150	19	300	33
	1 IPS	---	1"	2" IPS	.161	.170	.199	.209	240	33	350	25
	1 3/8"	1 1/4"	---	2" IPS	.183	.192	.201	.211	240	35	300	32
	1 5/8"	1 1/2"	1 1/4"	2 5/8"	.211	.221	.232	.243	180	43	100	21
	1 1/2"	---	1 1/2"	2 1/2" IPS	.221	.229	.743	.215	150	20	---	--
	2 1/8"	2"	---	3 1/8"	.242	.254	.266	.279	96	30	---	---
	2" IPS	---	2"	3" IPS	.252	.265	.277	.291	96	34	---	---
	3 IPS	---	3"	4 1/2" IPS	.420	.441	.462	.485	54	13	---	---
1/2"	3/8"	1/4"	---	1 5/8"	.168	.156	.173	.182	294	25	550	53
	1/2"	3/8"	1/4"	1 5/8"	.171	.178	.188	.197	216	23	600	45
	5/8"	1/2"	3/8"	1 1/2" IPS	.182	.131	.200	.210	216	24	450	41
	3/4"	5/8"	---	1 1/2" IPS	.197	.207	.217	.227	150	21	425	42
	7/8"	3/4"	1/2"	1 1/2" IPS	.213	.224	.234	.246	150	20	400	48
	1"	7/8"	---	2 1/8"	.225	.236	.247	.259	150	24	288	38
	3/4" IPS	---	3/4"	2 IPS	.235	.247	.258	.271	150	24	260	38
	1 1/8"	1"	---	2" IPS	.238	.250	.261	.275	150	25	250	36
	1" IPS	---	1"	2 5/8"	.260	.273	.286	.300	150	27	200	22
	1 3/8"	1 1/4"	---	2 5/8"	.265	.278	.291	.305	150	28	200	33
	1 5/8"	1 1/2"	1 1/4"	2 1/2" IPS	.252	.314	.329	.345	96	23	100	26
	1 1/2" IPS	---	1 1/2"	3 7/8"	.345	.353	.368	.397	96	26	---	--
	2 1/8"	2"	---	3" IPS	.369	.387	.405	.425	96	28	---	--
	2" IPS	---	2"	3 1/2" IPS	.379	.398	.417	.438	54	21	---	---
	2 5/8"	2 1/2"	---	3 1/2" IPS	.407	.428	.449	.492	54	28	---	--
	2 1/2" IPS	---	2 1/2"	4" IPS	.614	.640	.665	.594	54	29	---	--
	3 1/8"	3"	---	SHEET	.643	.670	.697	.627	54	36	---	--
	3" IPS	---	3"	SHEET	.638	.658	.699	.734	54	43	---	--
	4 1/8"	4"	---	SHEET	.655	.688	.720	.767	36	36	---	--
	4" IPS	---	4"	SHEET	.782	.821	.859	.903	36	38	---	--
	5" IPS	---	5"	SHEET	1.200	1.250	1.300	1.350	24	34	---	--
	6" IPS	---	6"	SHEET	1.200	1.245	1.290	1.353	22	35	---	--
3/4"	7/8"	7/8"	---	2 1/8"	.231	.241	.251	.260	294	49	450	85
	1/2"	3/8"	1/4"	2 1/8"	.244	.256	.268	.281	216	41	400	64
	5/8"	1/2"	3/8"	2" IPS	.297	.312	.327	.343	216	46	350	68
	3/4"	5/8"	---	2" IPS	.308	.323	.338	.385	150	33	325	62
	7/8"	3/4"	1/2"	2 5/8"	.344	.361	.378	.397	150	36	300	60
	1"	7/8"	---	2 5/8"	.385	.405	.424	.446	150	38	150	56
	3/4" IPS	---	3/4"	2 1/2" IPS	.393	.413	.433	.454	150	39	150	58
	1 1/8"	1"	---	2 1/2" IPS	.412	.433	.454	.475	150	40	150	58
	1" IPS	---	1"	3 1/8"	.470	.493	.517	.542	150	42	---	--
	1 3/8"	1 1/4"	---	3 1/8"	.477	.501	.524	.551	150	43	---	--
	1 5/8"	1-1/2"	1 1/4"	3" IPS	.638	.670	.701	.737	96	34	---	--
	1 1/2" IPS	---	1 1/2"	3 1/2" IPS	.668	.698	.731	.768	96	40	---	--
	2 1/8"	2"	---	3 1/2" IPS	.706	.741	.776	.816	96	38	---	--

OWENS-CORNING FIBERGLAS SUPPLY & CONTRACTING DIVISION
592 W. SWEDESFORD ROAD (Route 202 South) BERWYN, PA. 19312
Suburban 647-2705 Phila. 687-2023

375078

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FIBERGLAS

OWENS/CORNING
FIBERGLAS

Prices

No. EB-2-54
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Date 4/1/70
Supersedes 9/28/70

O-C FLEXIBLE TUBING

Nominal Wall Thickness	I.D. unless noted	Copper Tube Size	Iron Tube Size	Sleeving Size	Quick Load Ft. Tubing	Quick Load Ft. White Tubing	Warehouse Ft. Tubing	Warehouse Ft. White Tubing	Approx. Lin. Ft. Per Ctn.	Approx. Lin. Ft. Per Ctn.	Lin. Ft. Per Ctn.	Approximate Lbs./Ctn.
3/4" con't.	3"IPS	---	2"	4"IPS	.721	.757	.793	.835	54	30	---	---
	2 5/8"	2 1/2"	---	4IPS	.897	.942	.987	1.038	54	30	---	---
	2 1/2" IPS	---	2 1/2"	SHEET	1.037	1.089	1.141	1.198	54	33	---	--
	3 1/8"	3"	---	SHEET	1.068	1.121	1.175	1.233	54	41	---	--
	3"IPS	---	3"	SHEET	1.170	1.228	1.287	1.350	54	49	---	--
	4 1/8"	4"	---	SHEET	1.351	1.418	1.486	1.560	54	49	---	--
	4"IPS	---	4"	SHEET	1.428	1.499	1.560	1.649	30	40	---	--
	5"IPS	---	5"	SHEET	1.751	1.838	1.926	2.021	24	35	---	--
	6"IPS	---	6"	SHEET	1.975	2.074	2.172	2.281	18	39	---	--

O-C FLEXIBLE SHEET Thickness	TL		WAREHOUSE		Sizes	Sq. Ft. Per Ctn.	Weight Per Ctn.	CONTINUOUS ROLLS Sizes	Sq. Ft. Per Ctn.	Weight Per Carton
	BTK	MDT	BTK	MDT						
1/8"	$.180	$.180	$.198	$.198	30"x72"	720	72	30"x150'	375	54
3/16"	.232	.244	.655	.268	30"x72"	540	72	30"x150'	375	54
1/4"	.301	.316	.331	.347	30"x72"	390	72	30"x120'	300	54
3/8"	.358	.418	.438	.460	30"x72"	270	72	30"x74'	185	54
1/2"	.498	.523	.548	.575	30"x72"	195	72	30"x54'	135	54
1"	.655	.982	1.028	1.080	24"x72"	84	55	------	---	--
3/4"	.726	.760	.796	.835	24"x72"	108	66	24"x40'	80	43

O-C 520 ADHESIVE

Can Size	Net Price Per Can	Case Per Carton
1/2 Pt.	$ .65	24
1 Pt.	1.10	12
1 Qt.	1.97	6

TUBING SLITTER

NET PRICE PER SLITTER	
1-25	7.00
25 & over	5.50

ADDITIONAL CHARGES ON TUBING:

Slitting: Available on full cartons of cut-to-length tubing only. Charge for slitting is $.005/Lin. Ft. SLIT Tubing is produced to order only. Therefore, orders requesting slitting cannot be cancelled by the customer within 10 days or less of the requested delivery date.

COLLECT CALLS ACCEPTED

CALL COLLECT

OWENS-CORNING FIBERGLAS SUPPLY & CONTRACTING DIVISION
392 W. SWEDESFORD ROAD (Route 202 South) BERWYN, PA. 19312
Suburban 647-2700 Phila. OR7-2023

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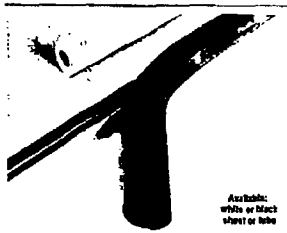
375078

OWENS-CORNING FIBERGLAS

Commercial D.28
August, 1970

O-C Flexible Tubing and Sheet Insulation "Standard"

A flexible foamed plastic insulation for hot or cold copper tubing and iron pipe operating at temperatures from -50° to 220° F.



Available: white or black sheet or tube

uses

O-C Flexible Tubing is recommended for use on cooling and heating water lines, chilled drinking water and refrigerant suction lines. The flexible feature of this resilient insulation allows it to conform to gradual bends. Available unslit to slide over tubing or pipes before they are installed, or, slit to apply over piping already in place

description

O-C Flexible Tubing insulations made from an expanded elastomeric plastic blend. Millions of tiny cells, each filled with an inert gas, make this product an extremely efficient insulator. It is resilient and soft returning to full thickness after being compressed. The inside surface is powdered to make it easy to slip over the pipe or tubing.

benefits

Efficient—a low thermal conductivity of 0.26 at 70° mean temperature assures minimum heat loss or gain—maximum performance of equipment.

Built-In Vapor Barrier—the closed cell structure eliminates the need for a separate vapor barrier and protects against moisture condensation on cold lines.

Uniform Thickness—strict quality control assures constant diameters and thicknesses, providing a saw fit on the pipe, and smooth butt joints.

Fast Application—available in two forms, slit and unslit. Means faster application. No banding required. The unslit material slips over gradual bends with ease.

Broad Uses—temperature range from —50° to 220°F makes possible insulation of most lines commonly used in commercial heating and air conditioning.

Flexible and Resilient—designed for exceptional ease of handling. It is so flexible it can be tied in knots—so resilient it springs back to original shape when untied. Resists mechanical abuse. Softer for easier flexibility and ease of application.

375030

Performance characteristics

density, lbs./cu.ft. (avg.).....6.0

thermal conductivity (Btu-in/sq.ft-hr°F)

70°F mean temperature.....0.27

90°F mean temperature.....0.28

water absorbtion, per ASTM D1056

max. % by weight.....5%

max. weight gain (lb/sq. ft.)..... 0.02

water vapor transmission, perm-in.....less than 0.05

maximum temperature limit continuous use F.....—50° to 220°

fire rating per ASTM D-635...Self extinguishing

ozone resistance.....Good

odor.....Extremely low level

Recommended Thicknesses

	DESIGN CONDITIONS*	PIPE SIZE	O-C Flexible Tubing Thickness for Line Temperature 50 F	32 F	0 F
COLD	(Prevention of condensation on indoor piping under a maximum severity of 80 F and 90% R.H. Typical of those conditions that an air conditioned space and cold drinking.)	½" thru 2" IPS	Min. ½"	Min. ½"	Min. ½"
		Over 2" IPS thru 4" IPS	Min. ½"	Min. 1"	Min. 1½"
NORMAL	(Prevention of condensation on indoor piping under a maximum severity of 85 F and 70% R.H. Typical of most residences, indoor areas of commercial buildings in the U.S. under normal (90 degree of severity.)	½" thru 2" IPS	Min. ½"	Min. ½"	Min. ½"
		Over 2" IPS thru 4" IPS	Min. ½"	Min. ½"	Min. ½"
SEVERE	(Prevention of condensation on indoor piping under a maximum severity of 90 F and 80% R.H. Typical of those conditions indoor areas where excessive moisture is introduced, or poorly ventilated insulated areas where the temperature may be depressed below comfort.)	½" thru 4" IPS	Min. ½"	Min. ½"	Applicable as Severe

* Consideration for condensation only. Heat gain of conduit and reinforced bonnet O-C Flexible Tubing insulation is used primarily on short run-outs.

flexible tubing sizes

Iron pipe sizes (IPS) ½" to 6"
copper tubing (CT) ½" O.D.—4⅛" O.D.
Wall thickness—inches (nominal) ⅜₁₆", ½", ⅝", ¾"
Inside Diameters—inches ½" to 6"
Length of Sections
Standard Cuttes 6 Feet
Made to order 100' to 700' depending on size

flexible sheet sizes

Standard size—24" x 72" and 30" x 72" (depending on thickness)
Sheet thickness—1/16", ⅛", ¼", ⅜", ½", ¾", 1"
continuous rolls—½" x 30" x 150', ⅝" x 30" x 74'
⅜" x 30" x 150', ½" x 30" x 54'
¼" x 30" x 120', ½" x 24" x 55'
½" x 24" x 48'

spacification compliance

HH-I-573b
MIL-P-15280-E
(GSA-FSS)

application

Insulation can be slipped over pipe or tubing before installation or slupped over piping already connected. All joints are sealed with O-C 500 adhesive. Paint both edges of slit as porous surfaces of tubing require it for firm bond. This tenacious adhesive forms a strong resilient bond which grows stronger with age. It is water and oil resistant.

Flexible tubing insulation can be slipped right over copper tube fittings. Cast bronze fittings or fittings on iron pipe can be "sleeved" with a larger diameter of insulation nested over the covering on the pipe and adhered with O-C 500 adhesive. O-C Flexible Tubing Insulation should be protected from the weather on lines running outdoors with: Benjamin Foster's BF 57-68; Insul caustic VIAC 550 or Alkyd-Chlorinated Rubber Paint or Tnmont 762 protective coating.



OWENS CORNING FIBERGLAS

OWENS-CORNING FIBERGLAS CORPORATION
Mechanical Products Division
Fiberglas Tower, Toledo, Ohio 43659

Pub. No. 1-MS-2247-F Litho in U.S.A. August 1970

ZESTON®

PRE-MOLDED HI-LO® TEMP-PVC INSULATION FITTINGS

The ONLY One-Piece Insulated Pipefitting Ever Manufactured



ZESTON® PRODUCTS

U.S. Patent No. 3,485,525
Canada Patent No. 829,544
England Patent No. 1,134,432
other patents pending

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Phone (201) 548-9190