

# PRODUCT SELECTION GUIDE

## HIGH TEMPERATURE INSULATION SOLUTIONS



**Industrial Insulation Group, LLC**

*A Calsilite/Johns Manville Joint Venture*

## Product

### Thermo-12® Gold

Calcium Silicate Pipe & Block Insulation



Publication No. IIG-300

## Description

A molded, high-temperature, abuse-resistant pipe and block insulation composed of hydrous calcium silicate. Recommended for use in the industrial processing and power generation industries where pipe and equipment operate up to 1200°F (649°C).

**Operating Temperature Limit:** 1200°F (649°C)

## Available Shapes & Sizes

### Form\*

Sectional Pipe Insulation

Quad Pipe Insulation

Hex Pipe Covering

Scored Block

3v (12" [305 mm] wide)

Flat Block (6", 12", 18", 24", 36"

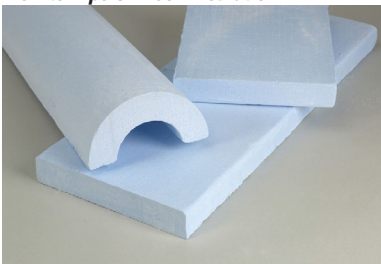
[152, 305, 457, 610, 914 mm] wide)•

\*All pipe and block insulations are 36" (914 mm) in length.

\*\*Available in 1/2" (13 mm) increments.

## Sproule WR-1200®

Perlite Pipe & Block Insulation



Publication No. IIG-200

A molded, high-temperature pipe and block insulation with exceptional corrosion-inhibiting properties. For use on systems operating up to 1200°F (649°C), it is recommended for industrial processing and power generating facility applications using stainless steel piping.

**Operating Temperature Limit:** 1200°F (649°C)

### Form\*

Sectional Pipe Insulation

Quad Pipe Insulation

Scored Block (12" [305 mm] wide)

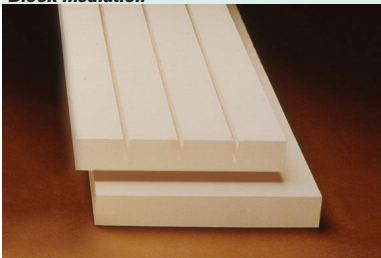
V-Groove Block (12" [305 mm] wide)

Flat Block (6", 12" [152, 305 mm] wide)

\*All pipe and block insulations are 36" (914 mm) in length.

## Super Caltemp™ Gold 1700

Block Insulation



Publication No. IIG-305

Features a Xonolite crystal structure that results in exceptional strength and extremely low water of hydration. Applications include curved vessels and large diameter pipes, fireproofing of structural steel, and as refractory backer in furnaces, boilers and kilns.

**Operating Temperature Limit:** 1700°F (927°C)

Thickness		Sheet Size	
in.	mm	in.	mm
1-3	25-76	12x36	305x914

## MinWool-1200® Pipe

High-Temperature Pipe Insulation



Publication No. IIG-401

Mineral wool pipe insulation made of inorganic fibers derived from basalt, a volcanic rock, bonded with a thermosetting resin. Excellent performance in high-temperature thermal control and fire resistance applications for mechanical/power and process piping systems.

**Operating Temperature Limit:** 1200°F (649°C)

Pipe Sizes		Thickness	
in.	mm	in.	mm
1/2-12	15-300	1	25
14-42	350-1050	1 1/2	38
		2	51
		2 1/2	64
		3	76
		3 1/2	89
		4	102
		4 1/2	114
		5	127

## MinWool-1200® Board

High-Temperature Board Insulation



Publication No. IIG-402

MinWool-1200 Industrial Board insulations are made of inorganic fibers derived from basalt, a volcanic rock, bonded with a thermosetting resin. They can be directly installed on heated flat or curved surfaces in a variety of power and process piping applications.

**Operating Temperature Limit:** 1200°F (649°C)

Thickness*		Sheet Size	
in.	mm	in.	mm
1-5	25-127	24x48	610 x1219

\*Available in 1/2" (13 mm) increments.

## Thermal Performance

## Specification Compliance

Pipe Sizes		Thickness**	
in.	mm	in.	mm
1/2-24	15-600	1-6	25-152
20-37	500-925	1-6	25-152
38-52	950-1300	1-3	25-76
30-250+	750-6350+	1 1/2-4	38-102
30-250+	750-6350+	1 1/2-4	38-102
Flat Surfaces		1-4	25-102

\*Block widths available from Mesa, CO. 6" and 12" (152 mm and 305 mm) block widths also available from Ruston, LA.

Mean Temperature		"k"♦	
°F	°C	Btu•in/(hr•ft²•°F)	W/m•°C
100	38	.40	.058
200	93	.41	.059
300	149	.45	.065
400	204	.50	.072
500	260	.55	.079
600	316	.60	.086
700	371	.65	.094

\*Thermo-12 Gold Pipe and Block Insulation as tested in accordance with ASTM C 177 and ASTM C 335.

ASTM C 533, Type I  
 ASTM C 795  
 ASTM E 136 (Noncombustible)  
 MIL-I-24244  
 MIL-I-2781F to 1200°F (649°C) [Pipe]  
 MIL-I-2819F Class 2 to 1200°F (649°C) [Block]  
 NRC 1.36

Pipe Sizes		Thickness	
in.	mm	in.	mm
1/2-24	15-600	1-4	25-102
24-40	600-1000	1-4	25-102
30-250+	750-6350+	1 1/2-5	38-114
30-250+	750-6350+	2-5	51-127
Flat Surfaces		1-5	25-127

Mean Temperature		"k"♦	
°F	°C	Btu•in/(hr•ft²•°F)	W/m•°C
100	38	.47	.068
200	93	.51	.074
300	149	.56	.081
400	204	.62	.089
500	260	.68	.098
600	316	.74	.107
700	371	.79	.114
800	427	.85	.123

\*Sproule WR-1200 Pipe and Block Insulation as tested in accordance with ASTM C 177 and ASTM C 335.

ASTM C 610  
 ASTM C 795  
 MIL-I-24244  
 NRC 1.36  
 Mercury Free  
 Food Grade Acceptable

Mean Temperature		"k"	
°F	°C	Btu•in/(hr•ft²•°F)	W/m•°C
200	93	.54	.078
400	204	.61	.088
600	316	.67	.097
800	427	.73	.105

ASTM C 533, Type II  
 ASTM E 84: Flame Spread: 0,  
 Smoke Developed: 0  
 ASTM E 136: Passes (Noncombustible)  
 MIL-I-2819; Class 3

Mean Temperature		"k"	
°F	°C	Btu•in/(hr•ft²•°F)	W/m•°C
75	24	.23	.033
100	38	.25	.036
200	93	.30	.043
300	149	.35	.050
400	204	.41	.059
500	260	.48	.069
600	316	.56	.081
700	371	.65	.094

ASTM E 84  
 ASTM E 136 (Noncombustible)  
 ASTM C 547  
 ASTM C 585  
 CAN/ULC-S102-M  
 NRC 1.36

Board Type	Density	
	lb/ft³	kg/m³
1230	3	48
1240	4	64
1260	6	96
1280	8	128
1210	10	160
1212	12	192

Mean Temp.		"k" (Btu•in/(hr•ft²•°F)) Board Type					
°F	°C	1230	1240	1260	1280	1210	1212
25	-4	.21	.21	.22	.22	.22	.22
75	24	.25	.24	.23	.23	.23	.23
100	38	.27	.26	.25	.25	.25	.25
200	93	.34	.32	.30	.30	.30	.30
300	149	.43	.40	.36	.36	.35	.35
400	204	.55	.49	.42	.42	.41	.40
500	260	.70	.62	.53	.49	.47	.46
600	316	.87	.75	.63	.56	.54	.52
700	371	1.06	.90	.75	.64	.62	.59

ASTM E 84  
 ASTM C 411  
 ASTM C 612  
 ASTM C 356  
 ASTM C 1104  
 CAN/ULC-S102-M

## Product

### Super Firetemp® High-Temperature Insulation



Publication No. IIG-103

## Description

Super Firetemp boards are a series of noncombustible, fireproofing products used in assemblies requiring one- to four-hour fire ratings with operating temperature limits from 1200 – 1800°F (649 – 982°C). Available in densities from 18-55 pcf (288-881 kg/m<sup>3</sup>), Super Firetemp is composed of hydrous calcium silicate and features a Xonotlite.

crystal structure, resulting in exceptional strength and stability under fire conditions. Recommended for use on columns, beams, tanks, air and exhaust ducts and cable trays.

Thickness		Sheet Size	
in.	mm	ft.	m
½-3	13-76	4x8	1.22x2.44

### Insulkote® ET Weather-Protective Coating



Publication No. IIG-10

Developed as a high quality protective coating, Insulkote ET is a compound of selected and processed bitumens, non-asbestos fibers and mineral fillers.

Recommended for weather-protecting insulated vessels, tanks, piping, equipment, and duct work, Insulkote ET is a non-vapor barrier, weather-proof coating for use over thermal insulation where “breathing” is required.

### CalBond® Gold High-Temperature Glue



Publication No. IIG-11

CalBond Gold is a modified, silicate-based glue for thermal insulations. It sets quickly to provide a high-temperature bond for porous insulating materials. CalBond Gold is completely asbestos free.

CalBond Gold is useful for bonding sections of calcium silicate or perlite high-temperature pipe or block insulation, to make mitered elbows, large insulating sections or other special shapes.

### CalCoat-127® 1200°F (649°C) One Coat Finishing Cement



Publication No. IIG-12

CalCoat-127 is a proprietary blend of hydraulic cement, calcium silicate and inorganic mineral fibers, with corrosion inhibitors, that provides a smooth finish over high-temperature insulation.

CalCoat-127 is recommended for finishing use with calcium silicate or perlite insulation in high temperature piping and equipment applications.

Industrial Insulation Group, LLC is a Calsilite/Johns Manville joint venture. IIG manufactures MinWool-1200® mineral fiber pipe, block and a variety of other insulations; Thermo-12® Gold Calcium Silicate pipe and block insulation; Super Firetemp® fireproofing board; SprouleWR-1200® Perlite pipe and block insulation; high temperature adhesives, and insulating finishing cement.

The physical and chemical properties presented herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Numerical flame spread and smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the Customer Service Office to assure current information. All Industrial Insulation Group products are sold subject to the IIG Limited Warranty and Limitation of Remedy. For a copy of the IIG Limited Warranty and Limitation of Remedy, email - info@iig-llc.com.



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