



## Thermo-12™ Gold

### MITERED FITTINGS

#### DESCRIPTION

Thermo-12 Gold is a pre-formed, high temperature, abuse-resistant pipe and block insulation with exceptional structural strength, composed of hydrous calcium silicate for use on systems operating from 1200°F (649°C). It is inorganic, non-combustible, asbestos-free and meets or exceeds the physical and thermal property requirements of ASTM C533, Type 1. Integral to Thermo-12 Gold is **XOX**, a distinctive formula and process that inhibits corrosion to outside surfaces of pipe and equipment.

#### APPLICATIONS

Because of its low thermal conductivity, durability, compressive strength and corrosion inhibiting properties, it is the preferred product for application on high temperature piping and equipment. Thermo-12 Gold is especially recommended for use in the petrochemical, power generation and process industries where piping and equipment are cycled from 200°F (649°C). The **XOX** corrosion inhibiting properties are not diminished by heating and cooling so the corrosion protection will continue for the life of the product. Thermo-12 Gold will not burn and may be used for fire protection in some applications. Please e-mail [info@iig-llc.com](mailto:info@iig-llc.com) for specific application information.

#### ADVANTAGES

- Guards pipe and equipment surfaces against corrosion
- Excellent resistance to breakage and physical abuse
- No binders to burn out; No loss of insulation integrity.
- Excellent thermal performance to 1200°F
- Superior thermal performance from 450°F to 1200°F
- Resistant to mold growth
- Fast, easy installation
- Large selection of sizes and forms

#### Available Forms and Sizes

Fitting covers are manufactured to fit any standard butt welded, long or short radius 90 degree and 45 degree elbows found in normal piping schemes.

*Single Layer	
Pipe Size, NPS (in.) ½" increments	Insulation Thickness
½" to 6"	1"
½" to 19"	1½"
½" to 24"	2", 2½", 3"
Double Layer Glued	
½" to 20"	3½", 4"
1" to 20"	4½", 5"

\* Select sizes may only be available in Double Layer Glued. See the List Price Schedule for specifics.



## THERMO-12® GOLD

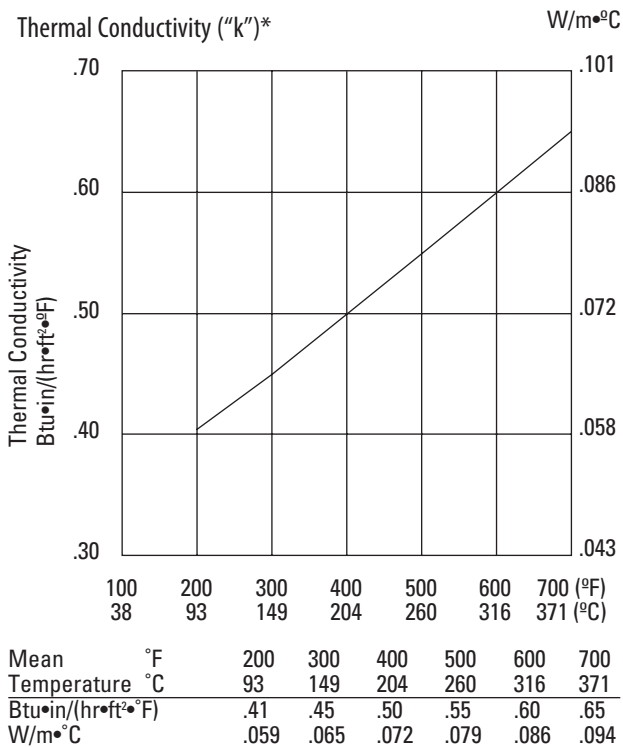
OPERATING TEMPERATURE LIMIT: 1200°F (649°C)



#### MITERED FITTING COVERS

Fitting covers are manufactured from Thermo-12 Gold mitered into precision segments. The segments are adhered with CalFab™ Adhesive for a permanent bond. For more information on CalFab Quick-Set Calcium Silicate Fabrication Adhesive see data sheet IIG-13.

**Hot Surface Performance.** Thermo-12 Gold passes ASTM C 411 to 1200°F (649°C).



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

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### SPECIFICATION COMPLIANCE

ASTM C 533, Type I  
ASTM C 1338  
MIL-I-2781F to 1200°F (649°C) [Pipe]  
MIL-I-2819F Class 2 to 1200°F (649°C) [Block]  
NRC Reg. Guide 1.36

### PHYSICAL PROPERTY REQUIREMENTS

ASTM C 533, Type I	
Density (Dry) Average	Not to exceed 15.0 lbs. per cu. ft. ASTM C 302 (232 kg/m <sup>3</sup> )
Flexural Strength	65 psi (448 kPa) ASTM C 203
Compressive Strength	>100 psi (690 kPa) ASTM C 165 to Produce 5% Compression
Abrasion Resistance	After First 10 Min. - 15 (% Weight Loss by Tumbling) After Second 10 Min. - 30 ASTM C 421
Linear Shrinkage	Less Than 2.0% After 24-hr. Soaking Period at 1200°F (649°C) ASTM C 356
Max. Service Temperature	1200°F (649°C) ASTM C 411
Mold Growth	Does Not Support ASTM C 1338
Surface Burning Characteristics	Flame Spread - 0 ASTM E 84 Smoke Developed - 0

### GOVERNMENT CERTIFICATION

When ordering material that requires Certificate of Conformance to ASTM, government, or other specifications, a statement of the fact must appear on the purchase order. These specifications require specific lot testing and prohibit the certification of the lot after the shipment has been made. There may be additional charges associated with compliance testing. Refer to customer service for more information.

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](mailto:info@iig-llc.com).

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