Thermo-12® Gold

Thermo-12 Gold is a preformed, high-temperature, abuse-resistant pipe and block insulation with exceptional structural strength, composed of hydrous calcium silicate for use on systems operating up to 1200°F (650°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 a distinctive formula and process that inhibits corrosion to outside surfaces of pipe and equipment.

**THE ADVANTAGES**

- Excellent resistance to damage enhancing the life of the system.
- Inhibits corrosion on carbon steel and stainless steel piping and equipment.
- Consistent thermal performance to 1200°F (650°C).
- Non-Combustible Insulation.
- Structural strength protects against damage to lagging.
- Asbestos, Mercury and Lead Free.
- No organic binders; No loss of insulation integrity due to binder burn out.
- Large selection of sizes and forms.

**APPLICATIONS**

Thermo-12 Gold is the product of choice for high-temperature pipe and equipment due to its high strength and durability, low thermal conductivity and corrosion inhibiting performance. Thermo-12 Gold is especially recommended for use in the petrochemical, power generation and process industries where piping and equipment operating up to 1200°F (650°C). The corrosion inhibiting properties are not diminished by temperature cycling so the corrosion protection will continue for the life of the product. Thermo-12 Gold will not burn and may be used as a component in fire protection systems in the some applications. Please visit our website at www.jm.com/industrial.com for specific application information.

**FIRE SAFETY**

Surface Burning Characteristics. When tested in accordance with ASTM E84, NFPA 255, and UL 723, Thermo-12 Gold has flame spread/smoke developed ratings of 0/0.

Non-Combustible. When tested in accordance with ASTM E136 as defined by NFPA 255 and NFPA 101.

**ADDITIONAL INFORMATION AND SDS**

Please visit our website at www.jm.com/industrial

CUSTOMER SERVICE, TECHNICAL & GENERAL INFORMATION (800) 866-3234
When ordering material to comply with any government specification or any other listed specification, a statement of that fact must appear on the purchase order. Government regulations and other listed specifications require specific lot testing, and prohibit the certification of compliance after shipment has been made. There may be additional charges associated with specification compliance testing. Please refer to IND-CSP-3 for Certification Procedures and Charges. Call customer service for more information.

Thermo-12 Gold is designed, manufactured, and tested in our own facilities, which are certified and registered to stringent ISO 9000(ANSI/ASQ 90) series quality standards. This certification, along with regular independent third-party auditing for compliance, is your assurance that this product delivers consistent high quality.

### PRODUCT CERTIFICATION

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### ISO 9000 CERTIFICATION

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### THERMAL CONDUCTIVITY

<table>
<thead>
<tr>
<th>Mean Temperature °F</th>
<th>100</th>
<th>200</th>
<th>300</th>
<th>400</th>
<th>500</th>
<th>600</th>
<th>700</th>
</tr>
</thead>
<tbody>
<tr>
<td>Btu • in/(hr • ft² • °F)</td>
<td>.344</td>
<td>.389</td>
<td>.437</td>
<td>.486</td>
<td>.538</td>
<td>.591</td>
<td>.647</td>
</tr>
<tr>
<td>W/m • °C</td>
<td>.050</td>
<td>.056</td>
<td>.063</td>
<td>.070</td>
<td>.078</td>
<td>.085</td>
<td>.093</td>
</tr>
</tbody>
</table>

### SPECIFICATION COMPLIANCE

- **ASTM C165 Compressive Strength**: >100psi(690kPa) 5% compression
- **ASTM C203 Flexural Strength**: >50psi(450kPa)
- **ASTM C302 Density (Dry) Average**: >14pcf(230kg/m³)
- **ASTM C356 Linear Shrinkage**: <2.0% after 24hr Soaking period at 1200°F(650°C)
- **ASTM C421 Abrasion Resistance**: Weight Loss by Tumbling After the first 10min <20% After the second 10min<40%
- **ASTM C447 Maximum Service Temperature**: 1200°F(650°C)
- **ASTM C533, Type I Material Specification**: Passes
- **ASTM C665 Corrosivity to Steel**: Passes
- **ASTM C795/C871/C692 Corrosion: Austenitic Stainless Steel**: Passes
- **ASTM C1338 Fungi Resistant**: Passes
- **ASTM C1617 Corrosion**: Passes
- **ASTM E84 Surface Burning Characteristics**: Flame Spread -0 Smoke Developed -0
- **ASTM E119 Building Fire Test**: Passes
- **ASTM E136 Non-Combustible**: Passes
- **BS 476 PART II**: Passes
- **Can/ULC S-102 Surface Burning Characteristics**: Flame Spread -0 Smoke Developed -0
- **NFPA 255 Surface Burning Characteristics**: Flame Spread -0 Smoke Developed -0
- **ISO 8143 Material Specification**: Passes
- **NRC Reg. Guide 1.36**: Passes
- **UL 1709 Hydrocarbon Fire Test**: Rated (See doc IND-TB005)
- **MIL-I-24244 Military Specification**: Passes
- **MIL-I-2781F to 1200°F(650°C) [Pipe]**: Military Specification Passes
- **MIL-I-2819F Class 2 to 1200°F(650°C) [Block]**: Military Specification Passes

### Custom Customer Service Information

**TECHNICAL & GENERAL INFORMATION**

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