

Product

- TPS Phenolic Foam is a closed cell, fire and moisture resistant rigid thermal pipe insulation manufactured in accordance with ASTM C1126 type III.
- Produced in large block form, then fabricated into pipe sections by Fujian Tenlead Advanced Material Co., LTD and imported exclusively by Thermal Pipe Shields, Inc.
- Available in 36" long sections in both iron pipe and copper tubing sizes with or without factory laminated vapor retarders.
- Low thermal conductivity provides superior insulating performance for mechanical piping systems operating between -292°F and 248°F.



Features

- TPS Phenolic Foam is a cost-effective choice for below ambient to cold systems that provides excellent thermal protection and enhanced fire resistance compared to other foam plastic insulations such as XPS or PIR.
- Meets 25/50 flame spread/smoke developed requirements for use within commercial building return air plenums.
- Low density with high compressive strength to support the weight of the pipe at the hangers.
- Closed cell foam insulation with factory applied vapor retarder provides excellent moisture resistance in below ambient systems such as chilled water lines in climates with high seasonal vapor drive.

Benefits

- High compressive strength thermoset phenolic foam does not crush easily compared to low compressive strength products such as mineral fiber pipe insulations.
- Phenolic foam is less dusty, light weight and fabricates easily on the jobsite.
- Factory applied All Service Jacket (ASJ) includes a self sealing lap (SSL) for easy closure of the longitudinal joints.
- When properly designed based on project conditions and installed with adequate thickness, phenolic foam insulation can prevent exterior vapor flow and the resultant moisture condensation on cold service piping.

Applications

- TPS Phenolic Foam insulation is commonly used on domestic hot and cold water, low temperature steam and chilled water piping systems in commercial and industrial facilities.
- High compressive strength, thermoset phenolic foam is often installed as an insert in mechanical piping systems at the structural pipe hanger.
- This high strength insert is used alone or in combination with a curved metal shield on the lower hemisphere of the insert to further distribute the dead/live loads of the pipe.
- Phenolic foam inserts allow for more predictable continuity of the exterior vapor retarder through the pipe hanger.
- This is a more labor friendly alternative to the traditional method of field cutting the fiberglass pipe insulation and then installing a wood block or high density fiberglass block at the pipe hanger.

Safety

- TPS Phenolic Foam does not contain asbestos
- CFC/HCFC free with zero ozone depletion potential (ODP)
- Thermoset plastic resistant to many common chemicals
- Non-fibrous or itchy, odorless and low dust
- Insulating hot piping will prevent personnel burn injuries in buildings and industrial plants.
- Maintains installed thickness without crushing to provide long term insulating performance
- Supports the secondary vapor retarder and metal cladding to provide continuous protection against moisture infiltration, loss of insulation performance and the resultant potential for corrosion under insulation (CUI).

Specification Compliance

ASTM C1126, Type III (foam core)	Grade 1	Grade 2	Grade 3	Grade 4
ASTM D1622 - Density	2 pcf (32 kg/m ³)	3.75 pcf (60 kg/m ³)	5 pcf (80 kg/m ³)	7.5 pcf (120 kg/m ³)
ASTM D1621 - Compressive Strength @ 10% deformation (min)	18 psi (124 kPa)	30 psi (207 kPa)	50 psi (345 kPa)	75 psi (517 kPa)
ASTM D6226- Closed Cell Content	≥90%	≥90%	≥90%	≥90%
ASTM C209 - Water Absorption (max)	3.0%	3.0%	3.0%	3.0%
ASTM E96 - Water Vapor Permeance (max perm-inch)	5.0	5.0	5.0	5.0
ASTM D2126 - Dimensional Stability (max % linear change)	2.0	2.0	2.0	2.0
ASTM E84 - Flame Spread / Smoke Developed	25/50	25/50	25/50	25/50

Thermal Conductivity

