

TECHNICAL SPECIFICATIONS

A. MANUFACTURING

Tripolymer® Foam Insulation shall be Tripolymer 105 manufactured by FDI Enterprises. Both the A component (resin) and B component (Foaming Agent Concentrate [FAC]) shall bear the manufacturing, date and product descriptions.

B. MATERIAL

The Tripolymer Foam Insulation system shall consist of the A component (resin) and B component (FAC) supplied by FDI Enterprises. Thickness shall be in accordance with architectural drawings. The insulation shall have the following physical properties:

- Density of .8 - 1.3 lb/ft.³
- Compressive Strength 35 psi.
- Fire Characteristics ASTM E-84
 - Flame Spread 5
 - Smoke 0
 - Fuel 0
- Thermal Conductivity C-177. @ 74°F
K factor of 0.219 BTU in/hr - ft² F
- Water Vapor Transmission ASTM C - 355
Permeability - perms-in 15.5 to 16.9
- Fire Hour Rating ASTM E - 119 -2 Hrs

C. INSTALLATION

Materials shall be installed according to the manufacturer's instructions through equipment manufactured by FDI Enterprises and by a factory trained/certified insulation contractor with a current certification card.

PRODUCT DESCRIPTION

Tripolymer products are phenolic-based, methylene-linked, synthetic polymers. They are made exclusively by FDI Enterprises. Both the chemical and equipment are propriety trade secret products. The Tripolymer system consists of two components: an aqueous resin solution (A) and foaming agent/ FAC (B). These materials are ratioed together with compressed air in specially engineered metering and pumping equipment.

INSTALLATION

Tripolymer Foam Insulation can be installed in almost any cavity through 1"-2" holes. Initial set takes approximately 10-30 seconds. Final curing is within 48-72 hrs., depending upon thickness. Tripolymer Foam Insulation is a cold-setting process independent of ambient temperatures. There is no further expansion once the foam leaves the delivery hose.

Tripolymer Foam Insulation is installed by FDI Enterprises' network of certified insulation applicators. Specially engineered equipment designed by FDI Enterprises for the application of Tripolymer Foam Insulation is required in the installation of the foam.

THERMAL STABILITY

There is no thermal degradation or reduction in R-Value over time with Tripolymer Foam Insulation. Most polyisocyanurates, polyurethane, and expanded polystyrenes degrade over time, resulting in lower R-Values.

NOTE: Tripolymer Foam Insulation is not a polyurethane, polyisocyanurate or expanded polystyrene product. It does not contain any petrochemicals or fire retardant chemicals. Tripolymer Foam Insulation, when exposed to intensive heat or flame, does NOT drip or produce smoke.

LIMITATIONS

This material should not be used against surfaces with temperature in excess of 212° F for prolonged periods of time. The foam will not support compressive load nor should it be used for flotation, or underground without adequate protection.

ORIGINAL EQUIPMENT MANUFACTURING

Tripolymer Foam Insulation is an excellent product for continuous process manufacturing and original equipment manufacturers. Computerized equipment for in-plant installation of Tripolymer Foam Insulation is available. This equipment can be adopted for a number of OEM purposes. For additional information please contact FDI Enterprises.

PROPERTIES	ASTM TEST METHOD	RESULTS
Fire Hour Rating	ASTM - E119	Upon Request
Thermal Conductivity (1) R, Hr. - Ft. 2°F/BTU @ 75°F mean @ 35°F mean	ASTM - E177	4.8 5
Surface Burning Characteristics (2) Flame Spread Smoke Development	ASTM - E84	5 0
Heat of Combustion	ASTM - D-240-73	6,435 btu per lb.
Corrosiveness	Doe(e)(3) HUD 6.2.8	No perforations No pitting < 0.05g
Water Vapor Transmission perms- in.	ASTM C335	15.9-16.9
Sound Transmission Loss	ASTM E413-73	STC 53
Density Lbs./ft.3	ASTM D-1622	0.8-1.2
Compressive Strength psi	ASTM D-1621 Proc A	5-45
Gel Time	DOE (3)(8) HUD 6.23	25 sec
Shrinkage (variable)	DOE (3)(8) HUD 6.23	approx 5-1.5%
Fungi Resistance	HUD procedure	No Growth
Toxicity	FHSA	Non Toxic

THICKNESS	@35° F MEAN TEMP	@75° F MEAN TEMP
3/4"	3.75	3.6
1"	5	4.8
1-1/2"	7.5	7.2
2"	10	9.6
3-1/2"	17.5	16.8
4"	20	19.2