



TECHNICAL DATA

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STYROTHANE 35068 FIRE RETARDANT "HARDCOAT" POLYURETHANE

Product Description

A rapid curing, solventless aromatic polyurethane system which provides a "hardcoat" protection for Styrofoam®, EPS and PUF foams. This product meets ASTM E-84 Class 1/Class A fire test criteria.

Features

- Meets ASTM E-84, Class 1 fire test criteria.
- Convenient 1:1 ratio
- Fast cure/fast cycle time for increased production rates
- Protection of EPS against chemical attacks (gas, oil, solvent)
- High gloss for product enhancement
- Durability extends substrate life
- Impact resistant
- Excellent waterproofing characteristics
- Resistant to freeze/thaw expansion contractions and thermal shock cycles

Recommended Uses

- Protection of EPS and Styrofoam®
- Protection of polyurethane foam
- Structural application where Class 1/Class A is required.

Primers

Styro-Bond 405

Typical Properties

Solids by Volume	100%
Volatile Organic Compounds	0.0 lb/gal (0.0 g/l)
Theoretical Coverage	1604 ft ² @ 1 mil (3.8 m ² @ 1 mm)
Recommend DFT	40 -100 mils (1 - 2.5 mm)
Mix Ratio	1"A" : 1"B"
Viscosity	400 cps ("A") 1000 cps ("B")
Shelf Life @ 60-110°F (16-43°C)	6 - 9 months
Color	Neutral

Specification Data

Elongation – ASTM D 412	36%
Tensile Strength – ASTM D 412	3200 ± 300 psi (22 ± 2 MPa)
Heat Sag - ASTM D 3769 @110 – 250 mils	
@150°F/65°C	0.50 inch (12.7 mm)
@ 200°F/93°C	0.69 inch (17.5 mm)
@250°F/121°C	0.88 inch (22.4 mm)
Flexural Modulus – ASTM D 790	51,000 ± 5,000 psi (347 ±35 MPa)
Hardness – ASTM D 2240	69 Shore "D"
Tear Resistance ASTM D1938, - Split Tear	680±70 pli (119 ±12 KN/m)

Ordering Information

Packaging:	10 gal & 110 gal kits
Shipping Weight:	13 lb/gal (5.9 kg/gal)

APPLICATION INFORMATION

STYROTHANE 35068

General Equipment Information

- **Pump:** 1:1 mix ratio, heated plural component spray equipment capable of maintaining a material temperature at the spray tip of 140-175°F (60-80°C), a delivery rate of 1.25 gal/min and an operating fluid spray pressure of 2600-3000 psi at the tip.
- **Transfer Pumps:** Two 2:1 ratio, high volume fluid transfer pumps equipped with 3/4" discharge lines.
- **Air requirements:** 30-35 CFM at 100 psi.
- **Electrical requirement:** 1 or 3-phase 220V, 60-80 AMP service depending on the electric motor purchased with the pump.

Application Parameters

- **Application Temperatures:** Ambient 40-120°F (5-49°C).
- **Material Temperature:** Both A & B components should be maintained at 75-85°F (24-29°C) prior to application.
- **Preheater Temperature:** Both A & B component preheater temperatures should be set at 140°F (60°C).
- **Hose Heat:** The hose heat should be set to maintain 140°F (60°C) to the gun. At 140°F, the material viscosities are close to equal so as to affect a better flow and mixing capability at the gun.
- **Pressure Settings:** The proportioning should be set to affect equal fluid pressures of a minimum of 2600 psi while spraying. The transfer pumps should be supplied with 90-100 psi at 10 CFM.

Mixing

Precondition components A & B to 75-90°F (24-32°C).

Power mix the "A" and "B" components for a minimum of 15-20 minutes. **Extreme care must be taken to use separate mixing devices to prevent cross contamination of components.**

Thinning

DO NOT THIN

Pot Life

Material Temperature	Time
75°F (24°C)	10-15 seconds

Clean Up

See ITW Futura Coatings Bulletin EQ120 for information on cleaning spray equipment.

Cure Time

	<u>Surface Temperature</u>		
	50-69°F (10-21°C)	70-89°F (21-32°C)	90-110°F (32-43°C)
Dry Surface	1 – 3 min	40 – 45 sec	20 – 30 sec
Hard Film	20 – 30 min	10-20 min	5 – 10 min
Recoat (min)	5 min	5 min	5 min
Recoat (max)	36 hours	24 hours	12 hours
Full cure	7 – 10 days	5 – 7 days	3 – 5 days

Safety Information

- Read the Material Safety Data Sheet (MSDS) and container labels for detailed health and safety information.
- Do not apply material in enclosed areas without adequate air exchange and ventilation.
- All application personnel must use fresh air respirators or fresh air hoods.
- Wear protective clothing, gloves and eye protection.
- Breathing fumes or contact with the skin may cause severe allergic reactions.
- **This product is intended for industrial use by properly trained professional applicators only.**

Storage Conditions

- Urethane coatings need to be protected from moisture contamination. Store drums and pails in a dry location at 60-90°F (16-32°C).
- Drums **must** be kept sealed at all times with a positive feed dry air, nitrogen blanket or desiccant cartridge system.
- In cold / cool weather materials **must** be kept above 50°F (10°C).

ITW FUTURA COATINGS, 1685 GALT INDUSTRIAL BLVD., ST LOUIS, MO, (314) 733-1110

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