

High Heat / Flame Retardant

Rigid polyurethane system

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PC - Rev.-Status: 02- 2018/04/30

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Key Properties

- Excellent physical properties
- Free of mercury, MOCA or TDI
- Meets UL94 V-0 requirements

Applications

- Formulated for room temperature hand-batch systems

Processing Properties

			Resin (Isocyanate)	Hardener (Polyol)
Mix ratio		pbw	100	56
		pbv	100	57
Density	ASTM D-792	g/cm ³	ca. 1.26	ca. 1.23
Viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 4,250	ca. 550

			Mixture
Mix viscosity at 77°F (25°C)	ASTM D-2393	cP	ca. 1,550
Gel time at 77°F (25°C)		min	5:30-8:30
Demold time at 77°F (25°C)		h	1:30-3:30

Cured / Mechanical Properties (approximate values)

Cure 1: 24 hours at 77°F + 16 hours at 180°F Cure 2: 7 days at 77°F			Cure 1	Cure 2
Aspect	visual		White	White
Density	ASTM D-792	g/cm ³	ca. 1.23	ca. 1.23
Shore hardness D	ASTM D-2240		80-90	80-90
Deflection temperature, HDT (66psi)	ASTM D-648	°F (°C)	266 (130)	207 (97)
Tensile strength	ASTM D-638	psi	5,700	6,600
Elongation at Break	ASTM D-638	%	6	3
Flexural strength	ASTM D-790	psi	11,000	9,500
Flexural modulus	ASTM D-790	psi	265,000	235,000
Notched Izod	ASTM D-256	ft-lbf/in	0.8	0.7
Linear shrinkage	ASTM D-2566	in/in	0.002-0.010	0.002-0.010

Processing

The processing and material temperature should be between 68-77°F (20-25°C).

Demold times can be reduced to 1 hour or less with pre-heated molds. For best results, de-air the material prior to casting, then pressurize to 60 psi.

Properties listed in cure 1 show a lengthy post cure at 180°F. A great HDT of 119 °C can still be achieved with a 24 hour room temperature plus 1 hour at 150°F cure.

The hardener component will darken as it ages. It is recommended that dry nitrogen be used to blanket the material to prevent oxidization and from becoming moisture contaminated. The cured material will also oxidize over a short period of time. This will cause the material to darken in shade. **The hardener and resin contain a filler that will settle from solution. Ensure you shake before use.**

Packaging

FX-8585-1 Quart Kit	3.12 lbs.
FX-8585-1 1 Gal. Kit	12.48 lbs.
FX-8585-1 5 Gal. Kit	62.4 lbs.
FX-8585-1 Drum Kit	702 lbs.

Storage

Original containers should be kept tightly sealed and stored at ambient temperatures 59-86°F (15°C to 30°C). If properly stored the products have the shelf-life indicated on the product label.

Partly used containers should always be sealed appropriately and used up as soon as possible.

Handling Precautions

Good workplace ventilation is to be ensured during processing. At the same time, the employer's liability insurance association's industrial hygiene safety regulations regarding the handling of reaction resins and their hardeners are to be observed. Please take heed of the appropriate safety data sheets.
