



RIGID-CAST 8006 FR A/B

RIGID 78 SHORE D FIRE RETARDANT URETHANE CASTING SYSTEM FOR SMALL SCALE PRODUCTION AND PROTOTYPE WORK

PRODUCT DESCRIPTION:

Rigid-Cast 8006 FR A/B produces a tough, rigid 78 Shore D urethane based material for use in making small detailed parts, models, prototypes and limited runs of production parts. This material has a convenient 1 to 2 parts by volume ratio, with an approximate three-minute working time, ideal for hand dispensing using dual cartridge static mix equipment.

PRODUCT HIGHLIGHTS:

- ◆ Designed for cartridge dispensing
- ◆ Parts can demold in 45 - 60 minutes
- ◆ Convenient 1:2 ratio by weight or volume
- ◆ Heat resistance to 195°F (91°C)
- ◆ Meets UL 94V-0 classification
- ◆ Non-mercury containing catalyst system
- ◆ Non-brittle during early cure and after demold

PHYSICAL PROPERTIES:

Hardness, Shore D ASTM D-2240.....	78 ± 2
Specific Gravity, (g/cc) cured ASTM D-792	1.25
Cubic Inches per Pound	30.5
Color/Appearance.....	Cream
Tensile Strength, (psi) ASTM D-638.....	4,800
Tensile Modulus, (psi) ASTM D-638.....	1.3 x 10 ⁵
Elongation, (%) ASTM D-638.....	3.8
Flexural Strength, (psi) ASTM D-790.....	9,300
Flexural Modulus, (psi) ASTM D-790	2.8 x 10 ⁵
Izod Impact, (ft.-lb./in. avg.) ASTM D-256	0.48
Shrinkage, (in/in) linear (12" x 1/2" x 1/4"):	
7-day ambient cure	0.002
Post-cure, Method 1(See pg. 2).....	0.003
Heat Deflection Temperature:	
@ 66 psi, ASTM D-648	195° ± 5°F (91° ± 3°C)
@ 264 psi, ASTM D-648.....	180°F (82°C)

*Cured physical properties were obtained from fully heat-cured specimens.

HANDLING PROPERTIES:

Mix Ratio:

Part A50 parts by weight or volume
Part B100 parts by weight or volume

Viscosity, (cps) @ 77°F (25°C) Brookfield:

Part A200
Part B2,700/slightly thixotropic
Initial Mixed Viscosity800

Color:

Part ADark amber
Part BLight cream

Work Time @ 77°F (25°C).....2 ½ to 3 minutes

Demold Time.....45 - 60 minutes

RECOMMENDED PROCESSING PROCEDURES:

Both A & B components need to be pre-warmed and pre-blended prior to use. The A component should be conditioned to 80 - 90°F (27° - 32°C) and the B component warmed to 110 - 125°F (43° - 52°C). Stir both sides to blend at the recommended temperatures *prior* to combining.

POST-CURING, RECOMMENDED PROCEDURE:

Two suggested post-curing methods to achieve maximum physical properties are as follows:

Method 1:

After demolding, allow parts to further cure at 77°F (25°C) for 2 to 4 hours. Parts then may be stage-cured at 140° ± 10°F (60° ± 6°C) for 4 hours, followed by 4 - 6 hours at 180° - 200°F (82° - 93°C). Support may be needed for certain configurations during stage curing.

Method 2:

After demolding, allow parts to cure for 16 hours (overnight) at 77°F (25°C), followed by 6 - 8 hours at 180°F (82°C), or stage-cure per Method 1. Support may be needed depending on part configuration. Shrinkage is minimized by not rushing the demold and heat curing stages.

NOTE:

Rigid-Cast 8006 FR A/B will cure at ambient temperatures in 3 - 5 days. However, hardness will be slightly reduced and the heat distortion temperature will be lower by approximately 25°F (14°C).

STORAGE:

Store in a cool dry place. Unopened containers of RC-8006-A will have a shelf life of 6 months and RC-8006-B will have a shelf life of 30 days from date of shipment when properly stored at room temperatures. Purge opened containers with dry nitrogen before re-sealing.

PACKAGING:

1 Gallon kits.....4 lbs. A, 8 lbs. B
5 Gallon kits.....20 lbs. A, 40 lbs. B

SAFETY PRECAUTIONS:

Use in a well-ventilated area. Avoid contact with skin using protective gloves and protective clothing. Repeated or prolonged contact on the skin may cause an allergic reaction. Eye protection is extremely important. Always use approved safety glasses or goggles when handling this product.

IF CONTACT OCCURS:

Skin: Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Seek qualified medical attention if allergic reactions occur.

Eyes: Immediately flush with water for at least 15 minutes. Call a physician.

Ingestion: If swallowed, call a physician immediately. Remove stomach contents by gastric suction or induce vomiting only as directed by medical personnel. Never give anything by mouth to an unconscious person.

Refer to the Material Safety Data Sheet before using this product.