

PC-3154 Urethane Casting System

Elastomer system for water filtration end caps

Technical Bulletin

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PC-3154 is a two component, room temperature cured, unfilled, tough elastomeric urethane system designed for casting end caps for water filtration. The combination of low viscosity and unique gelling characteristics of the material make it ideal for filter manufacturing. The chemical composition has a high degree of hydrolysis resistance and has very little hardness loss in water at elevated temperatures (85°C). In addition, raw material composition will pass NSF requirements.

Key Features

- Low Viscosity
- Tough
- Very good thermal stability
- Excellent water resistance

Typical Uncured Properties

| | |
|---|-------------------|
| Color | |
| Resin | Translucent Clear |
| Hardener | Dk. Amber |
| Mixed | Clear Dk. Amber |
| Viscosity, cps @ 77°F ± 3°F | |
| Resin | 960 |
| Hardener | 150–250 |
| Mixed | 375–400 |
| Density, Lbs/Gal (SP.GR) @ 77°F +/- 3°F | |
| Resin | 8.47 (1.01) |
| Hardener | 10.30 (1.22) |
| Mixed | 9.22 (1.10) |

Mixing Specifications & Characteristics

| | |
|---------------------------------|---|
| Mix Ratio: | |
| By Weight | 100 parts resin to 75 parts hardener |
| By Volume | 1.66 parts resin to 1.00 parts hardener |
| Gel Time, min:sec @ 77° +/- 3°F | |
| 175 Gram Mass | 25:00–30:00 |
| Recommended Step Cure | |
| 1. Room Temperature (77°F/25°C) | 2 hrs |
| 2. Heat: (212°F/100°C) | 2–3 hrs |

Typical Cured Properties

| | |
|---|---------------------|
| Color | Mustard |
| Hardness (Shore D) | 80–85 |
| Glass Transition Temp (T _g) | 194-203°F (90-95°C) |

Processing Instructions

For good results, automatic mixing and dispensing equipment should be used. Please consult with Polyset technical staff before making final processing decisions.

Storage

Keep away from flames. Material should be used once container is opened. Long term storage of opened material should be under nitrogen. Shelf life of both resin and hardener is 6 months @ 25°C (77°F) in unopened containers. Storage temperatures for the hardener (isocyanate) should be maintained from 18–35°C. Under these storage conditions the hardener will remain clear for periods of up to six months.

If solidification should occur because of exposure to temperatures below 18°C, the product can be reheated up to 60°C in a well ventilated oven for the minimum amount of time necessary to render it clear. Excessive heating causes dimerization, loss of NCO, and increase in viscosity. In the event of crystallization, please contact Polyset for recommendations.

Safety Information

Avoid direct contact. Use gloves when handling resin and hardener, if skin contact occurs, wash with soap and water. If resin or hardener enters the eyes, flush with cool water for at least 15 minutes and call a physician immediately. Refer to SDS on PC-3154 for further details.

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