

VFI®-3001 70 A POLYURETHANE CASTING RUBBER

VFI-3001 70 A Polyurethane Casting Rubber is a fast-setting, two-component urethane rubber with easy processing capabilities for injecting parts and castings. The material's low viscosity allows you to make parts of varying sizes that maintain final physical properties. VFI-3001's fast-setting capabilities allow you to demold in 8 minutes for improved part production. It has great properties that make it stain, antimicrobial, and impact-resistant urethane rubber with a smooth, glossy finish. With many base pigments available, the rubber can be easily pigmented, allowing for the adjustment and addition of colors. This durable rubber has been used in various molding and casting applications including table edging.

- Easy processing for use in an injection molding system
- Easily pigmented for adjustment and addition of available colors
- Chemical, stain, and antimicrobial-resistant urethane rubber
- Fast-setting for quick demolding and improved part production
- Low viscosity for varying part sizes that maintain final properties

PHYSICAL PROPERTIES

	TEST METHOD	TEST RESULTS
Shore Hardness	ASTM D2240	70 A
Tensile Strength	ASTM D412	925 psi
Elongation at Break	ASTM D412	300%
Tear Strength (Die C)	ASTM D624	115 pli
Shrinkage (12" x 1/2" x 1/2")	ASTM D2566	N/A
Standard Color	N/A	Neutral

LIQUID PROPERTIES

	TEST METHOD	TEST RESULTS
Mix Ratio by Volume	N/A	100A:250B
Mix Ratio by Weight	N/A	100A:200B
Weight per Gallon A Side	ASTM D1475	9.88 lb/gal
Weight per Gallon B Side	ASTM D1475	8.06 lb/gal
Mixed Weight per Gallon	ASTM D1475	8.58 lb/gal
Specific Volume	N/A	N/A
Viscosity A Side (cps @ 77°F)	ASTM D2196	650 cps
Viscosity B Side (cps @ 77°F)	ASTM D2196	450 cps
Mixed Viscosity (cps @ 77°F)	ASTM D2196	N/A
Pot Life (150g mass @ 77°F)	N/A	2:40 minutes
Gel Time (150g mass @ 77°F)	N/A	3:00 minutes
Demold Time @ 77°F	N/A	8 minutes
Full Cure Time	N/A	5 days

MANUFACTURER OF HIGH-PERFORMANCE POLYMERS

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THICKNESS REQUIREMENTS

VFI recommends using a different material with a longer working time for parts requiring more than 3 minutes of gel.

MOLD PREPARATION

Ensure all surfaces are clean and free of oils, dirt, debris, and other contaminants. The molding surface must be sealed and covered with a release agent for ease of demolding. Release agents are required to help prevent unwanted adhesion and prolong the life of the mold. Compatible molds for injecting include urethane, metal, and platinum silicone when prepared properly. Heating the mold between 70°F-150°F can accelerate the curing process, allowing for faster demolding. However, increasing the surface temperature beyond 72°F will shorten the pot life.

MIXING

The B side (Poly) material must be premixed before using VFI-3001. The material's short working time only allows for injection molding applications. A proportioner is required to inject the material.

POST-CURE

The casting can be demolded after curing for at least 8 minutes at room temperature. The part does not have to be post-cured to achieve full properties and will obtain these properties after 5 days. You can achieve full physical properties faster if you post-cure the material in an oven at 150°F for 16 hours.

STORAGE/SHELF LIFE

Store between 60°F - 90°F in a clean, dry building. The shelf life of unopened containers is 12 months after the date of manufacture. Once open, use it immediately. If you plan to store the material after opening, both sides must be nitrogen purged.

PRECAUTIONS

VFI-3001 contains isocyanate in the A side material and may irritate the skin. It is also toxic if inhaled as particulate matter. Avoid prolonged breathing of vapors and repeated skin contact. Use only with adequate ventilation. Do not thin or add foreign material to the product. See Safety Data Sheet for complete safety instructions.