



OVERNIGHT CURE POLYURETHANE ELASTOMERS SEMI-RIGID

➔ These **Overnight Cure, Semi-Rigid Polyurethane Elastomers** are known for their excellent impact strength and abrasion resistance, making them ideal for foundry tooling as well as semi-rigid part production.



Freeman 1060LV in Black, Amber, and Red

Specifications

Arranged in order of Shore Hardness with discontinued products noted.

| | Mix Ratio R:H (by wt.) | Mix Ratio R:H (by vol.) | Mixed Viscosity (cps) | Casting Thickness Limit (in.) | Shore Hardness | Gel Time (min.) @ 72°F | Demold Time (hr.) @ 72°F | Density (g/cc) | Volumetric Yield (in. ³ /lb.) | Shrink (in./in.)* | Tensile Strength (psi) | Elongation (%) | Tear Strength (ppi) | Deflection Temp (°F) | Color |
|---|------------------------|-------------------------|-----------------------|-------------------------------|----------------|------------------------|--------------------------|----------------|--|-------------------|------------------------|----------------|---------------------|----------------------|-------------------|
| RenCast 6402-3 (Discontinued) <i>See Freeman 2480</i> | 35:100 | 31:100 | 940 | 1 | 82A | 31-33 | 24 | 1.08 | 25.6 | 0.001 | 2,172 | 270 | 285 | - | Off-White |
| Freeman 2480 | 46:100 | 1:2.5 | 630 | 4 | 75-85A | 10-15 | 24 | 1.08 | 25.6 | 0.0002 | 1,420 | 400 | - | - | Translucent White |
| Freeman 1050 (Discontinued) <i>See Freeman 2050</i> | 1:1 | 100:94 | 1,650 | 4 | 85A | 26 | 16 | 1.10 | 25.2 | 0.001 | 2,050 | 510 | 280 | - | Lt. Amber |
| RenCast 6403-3 (Discontinued) <i>See Freeman 2490 or 2050</i> | 50:100 | 44:100 | 710 | 0.5 | 85-90A | 30 | 24 | 1.10 | 25.2 | 0.001 | 3,334 | 328 | 419 | - | Off-White |
| RenCast 6442 (Discontinued) <i>See Freeman 2050</i> | 1:1 | 100:94 | 1,610 | 4 | 85A | 28 | 24 | 1.09 | 25.4 | <0.001 | 2,100 | 525 | 290 | - | Lt. Amber |
| RenCast 6443 (Discontinued) <i>See Freeman 2490 or 2050</i> | 100:60 | 100:60 | 2,450 | 2 | 95A | 19 | 24 | 1.06 | 26.1 | 0.001 | 3,500 | 475 | 375 | - | Lt. Amber |
| Freeman 2490 | 58:100 | 1:2 | 600 | 4 | 85-95A | 10-15 | 24 | 1.09 | 25.4 | 0.0002 | 1,940 | 500 | - | - | Translucent White |
| Freeman 2050 | 100:40 | - | 2,000 | - | 90A | 23 | 16 | 1.06 | 26.6 | - | 1,500 | 460 | 350 | - | Amber |
| Flexane 80 | 77:23 | - | 10,000 | 4 | 87A | 30 | 10 | 1.04 | 26.5 | 0.0018 | 2,100 | 650 | 350 | - | Black |
| Freeman 2095 | 100:40 | 100:39 | 2,400 | 2 | 95A | 30 | 24 | 1.04 | 26.5 | 0.0002 | 2,550 | 430 | 325 | - | Dark Amber |
| Flexane 94 | 69:31 | - | 6,000 | 4 | 97A | 10 | 5 | 1.04 | 26.5 | 0.0014 | 2,800 | 500 | 415 | - | Black |
| Freeman 1060 (Discontinued) <i>See Freeman 1060LV or 2060/60</i> | 100:60 | 100:60 | 2,600 | 2 | 60D | 28 | 16 | 1.05 | 26.4 | 0.001 | 3,200 | 300 | 510 | - | Red, Black |
| RenCast 178-88/Ren 6444 (Discontinued) <i>See Freeman 1060LV or 2060/60</i> | 100:60 | 100:60 | 2,500 | 2 | 60D | 27 | 24 | 1.05 | 26.4 | 0.001 | 3,400 | 325 | 550 | - | Red |
| Freeman 1060LV | 100:50 | 100:50 | 750 | 2 | 60D | 15-25 | 16 | 1.16 | 23.8 | 0.001 | 3,200 | 45 | 550 | TBD | Amber |
| Freeman 2060/60 | 100:60 | 100:60 | 2,200 | 3 | 60D | 25 | 24 | 1.06 | 26.3 | <0.002 | 3,600 | 325 | 560 | 135 | Amber, Red, Black |
| Freeman 1066 (Discontinued) <i>See Freeman 2060/66</i> | 100:50 | 100:50 | 3,200 | 2 | 65D | 15-17 | 2-4 | 1.03 | 26.9 | 0.0025 | 3,100 | 140 | 630 | 181 | Red, Black |
| Freeman 2060/66 | 100:50 | 100:50 | 3,200 | 2 | 65D | 15 | 24 | 1.03 | 27 | <0.002 | 3,100 | 140 | 630 | 180 | Amber, Red, Black |
| ASTM | - | - | D-2393 | - | D-2240 | D-2471 | - | D-792 | D-792 | D-695 | D-638 | D-790 | D-624 | D-2566 | - |

For part numbers, technical documents, and ordering, visit our website at www.FreemanSupply.com.

Freeman 2050

Alternative to Freeman 1050, RenCast 6403-3, RenCast 6442, and RenCast 6443

- ▶ 23 min. gel time
- ▶ 16 hour demold
- ▶ 90 Shore A

Freeman 2050 is a tough, semi-flexible urethane that is ideal for creating molds requiring some degree of flexibility, as well as for producing semi-rigid prototypes and finished parts.

It may be easily thickened for brush-on applications using Fumed Silica.

Freeman 1060LV

Alternative to Freeman 1060, RenCast 178-88/Ren 6444

- ▶ 20 min. Gel Time
- ▶ 16 hr. demold
- ▶ 60 Shore D

Freeman 1060LV is a low-viscosity, semi-rigid polyurethane elastomer designed for foundry applications where abrasion resistance and impact strength are critical. Features same-day demold

and low viscosity for ease of pouring and capturing detail. Freeman 1060LV is ideal for foundry patterns, core boxes, wear resistance parts, and holding/assembly fixtures.

Freeman 2060/60

Alternative to Freeman 1060, RenCast 178-88/Ren 6444

- ▶ 25 min. gel time
- ▶ 24 hour demold
- ▶ 60 Shore D

Freeman 2060 with Freeman 60 Hardener is a semi-rigid polyurethane elastomer recommended for applications where abrasion resistance and impact strength are critical.

Freeman 2060/60 is ideal for foundry patterns, core boxes, wear resistance parts, and holding/assembly fixtures. Available in amber, red, or black.

Freeman 2060/66

Alternative to Freeman 1066

- ▶ 15 min. gel time
- ▶ 24 hour demold
- ▶ 65 Shore D

Freeman 2060 with Freeman 66 Hardener is specifically designed for highly abrasive-resistant foundry tooling. It can be sanded or machined once cured and features a heat deflection temperature of 180°F. It has a shorter gel time than Freeman 2060/60. Available in amber, red, or black.



Freeman 2095

- ▶ 30 min. gel time
- ▶ 24 hour demold
- ▶ 95 Shore A

Freeman 2095 cures semi-rigid in mass and is flexible in thin cross-sections. It is used for foundry patterns, core boxes, metal forming pads, and other applications where good abrasion resistance and strength are required. Castable to 2" thickness.

Freeman 2480

Alternative to RenCast 6402-3

- ▶ 10-15 min. gel time
- ▶ 24 hour demold
- ▶ 75-85 Shore A

Freeman 2480 is a tough and flexible, featuring low viscosity for easy mixing and excellent detail reproduction. This system is ideal for production models, metal-forming pads, and a variety of mechanical parts. Maximum casting thickness is 4".

Freeman 2490

- ▶ 10-15 min. gel time
- ▶ 24 hour demold
- ▶ 85-95 Shore A

Freeman 2490 is ideal for producing durable parts such as impellers, rollers, gears and wheels. It features quick gel time, good hydrolysis resistance, and low viscosity for easy mixing and excellent detail reproduction. Maximum casting thickness is 4".

Devcon Flexane 80

- ▶ 30 min. gel time
- ▶ 10 hour demold
- ▶ 87 Shore A

Featuring low shrink and high chemical and abrasion resistance, this black-colored material is ideal for creating flexible molds and holding fixtures. Use the Flex-Add additive with Flexane 80 Liquid to produce a lower durometer castable urethane.

Devcon Flexane 94

- ▶ 10 min. gel time
- ▶ 5 hour demold
- ▶ 97 Shore A

Flexane 94 features low shrink and high chemical and abrasion resistance. It is a black, semi-rigid material for extremely tough, flexible molds and non-marring holding and assembly fixtures.



ISOMold URP-5122

- ▶ 15 min. gel time
- ▶ 16 hour demold
- ▶ 70 Shore A

This semi-rigid urethane is used to make molds of detailed masters that do not contain undercuts. The most common uses include foundry patterns and core boxes, gaskets, liners, and fixtures. This dark amber, economical material features a 1:1 mix ratio by volume for ease of use.

For part numbers, technical documents, and ordering, visit our website at www.FreemanSupply.com.



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