

# Polycraft FC3000



## Flexible Polyurethane Resin Designed for Roto / Slush Casting

Revision Date: 25/06/24

1:1	2.15- 2.45 Min	20 Min	White	65-70D	 25°C	1kg in weight equals approximately 913ml in volume
Mix Ratio By Weight	Pot Life	Demould Time	Cured Colour	Hardness	Working Temperature	Density

### Overview

Polycraft FC3000 is an odourless two component polyurethane system which is designed for thin sections, or castings up to 20mm thick that require quick demould times. FC3000 is ideally suited for use in rotocasting / slush casting (hollow parts) type applications due to its controlled gellation time, good flexibility and toughness.

### Key Properties

- Rapid Demould
- Odourless
- Good Flexibility
- Tough / Impact Resistant
- Can be painted

### Preparation

- Ensure Parts A & B are in the correct temperature range (22°C)
- Parts A & B must be shaken or stirred separately prior to use.
- Mould or item to be filled must be clean and dry
- Determine if release agent is required

### Mixing

All mixing and curing should be done in room temperature conditions. Polyurethanes are moisture sensitive; Best to use plastic mixing containers and plastic mixing sticks to help avoid the introduction of moisture (paper or wood tools may introduce moisture). Take care to weigh out correct amounts of A and B into a mixing container. Reseal material containers immediately after to protect against atmospheric moisture contamination. Mix Parts A & B, scraping sides and bottom of mixing container to ensure both components are thoroughly mixed, then pour the mixture into the mould as quickly as possible.

### Curing

Castings should be allowed to remain in the mould until thoroughly cured. Demoulding early may lead to deformation of the casting. The use of pre-heated moulds will speed up the demould time. Lower temperatures will slow the cure and extend demould times. Thin castings will take longer to cure than thick castings. Mould material type, shape & size and use of fillers are just some of the other variables that may affect curing times. No two moulds are the same so testing is recommended.

### Additives

Colour pigments and fillers may be added to this resin system to change appearance, reduce costs (lightweight fillers), add density, and adjust properties. Please note this resin is susceptible to UV damage and may yellow on exposure to sunlight.

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Material	A B	Polyol Isocyanate
Colour	A B	White-ish Yellow
Viscosity	Polyol Isocyanate Mixed	400-500 100-140 170-230
Density @25°C (g/cm <sup>3</sup> )	Polyol Isocyanate Mixed	1.02 - 1.04 1.12 - 1.17 1.08 - 1.11
Mix Ratio	By Weight	100: polyol 100: Isocyanate
Potlife (200g @25°C)	mins	2.15 - 2.45
Recommended Casting Dept	mm	1-20

Hardness	Shore D	65-70
Tensile Strength	MPa	14 - 19
Elongation at break	%	5 - 25
Flexural Strength	MPa	18 - 22
Flexural Modulus	MPa	300 - 500
Linear Shrinkage	%	<0.05
Heat Distortion Temperature (HDT)	Celsius	44 - 48

### Storage / Shelflife

These materials have a limited shelflife and should be used as soon as possible. Keep containers tightly sealed when not in use. Consider the use of a dry gas product, which can be sprayed into opened containers to displace moist air before resealing containers to help extend shelf life. Materials should be kept in dark storage between 18°C and 25°C. Under these conditions, shelf-life in the original unopened containers is six months from the date of purchase.

### Health & Safety

Before use please read product labels, technical sheets and safety data sheets and ensure you have adequate understanding of the safety precautions and directions before using the materials.