



Technical Data Sheet

Polycraft FC-8000

Two component, Flexible polyurethane system, Hardness 77 82-Shore A

Polycraft FC-8000 is a tough, durable, polyurethane elastomer of 80 Shore A, used for mould making or prototype parts requiring high tear strength and excellent abrasion resistance

Special Features

- High tear strength
- Tough and durable
- Excellent abrasion resistance

Mix Ratio

Polycraft FC-8000 is mixed with an easy to measure 10:100 by weight ratio

Product Data

| Property | Units | FC8000A | FC8000B | Mix |
|-----------------------|-------------------|-------------------|--------------|--------------|
| Material | - | Formulated Polyol | Isocyanate | Polyurethane |
| Appearance | - | Amber Liquid | Amber Liquid | Amber Liquid |
| Viscosity (25°C) | mPa.s | 250 – 450 | 5000 – 8000 | 4000 – 7000 |
| Density (25°C) | g/cm ³ | 1.10 – 1.15 | 1.00 – 1.10 | 1.01 – 1.11 |
| Pot life (200g, 25°C) | Minutes | - | - | 35 – 45 |
| Demould Time (25°C) | Hours | - | - | 16 – 24 |
| Full Cure (25°C) | Days | - | - | 7 |



Cured Data

| Properties | Standard | Units | Result (Full Cure) |
|----------------------------|---------------------------------|--------------|-------------------------------|
| Hardness | BS 2782: Part 3: Method 365B | Shore A | 77 – 82 |
| Linear Shrinkage | 500 x 50 x 10 mm 25°C cure | % | < 0.1% |
| Tensile Strength | BS 2782: Part 3: Method 320B | MPa | 4.0 – 4.5 |
| Elongation at break | BS 2782: Part 3: Method 320B | % | 400 – 450 |
| Tear Strength | BS 903: Part A3 | kN/m | 48.0 – 53.0 |

Mould Preparation

Ensure that the mould is clean and dry and if the mould is made from metal, wood or resin, use a release agent. Wooden moulds should be sealed well before casting. For flexible moulds, please contact our technical department for more advice. Never use silicone release agents if the cast units are to be painted.

Mixing Instructions

Shake the FC8000A container thoroughly in order to homogenize the resin. Ensure that both components are at least 20°C before mixing.

FC8000A should be mixed with FC8000B according to the indicated mixing ratio. Both components should be thoroughly mixed, care should be taken to avoid air entrapment and make certain that material at bottom and sides of container is thoroughly stirred into the centre. After thorough mixing, the material should be poured into the mould. To avoid air entrapment, pour the material slowly, and into one place in the mould. In order to obtain a bubble free cast, the material should be degassed after mixing and pouring. Mixing, pouring and degassing must be completed within the stated pot life.



Curing and post curing

The precise demould time will vary with the casting thickness, as thin sections will cure slower than thicker sections. If cured at room temperature, the casting can generally be demoulded after 16 – 24 hours. If quicker demould times are required, the product can be cured at elevated temperatures (up to 80°C). Curing at high temperatures will increase shrinkage, but will decrease demould times dramatically.

Storage

FC-8000A and B should be stored in original, unopened containers between 20 and 25°C. FC8000B may crystallize partially or completely if not stored at above 20°C. Like all polyurethanes, both components are moisture sensitive. Moisture absorption will cause excessive aeration in cast parts. KEEP THE PACKING TIGHTLY SEALED WHEN NOT IN USE.

If stored under the above conditions, FC8000A and B will have a shelf life of 6 months, from the date of production.