



Technical Data Sheet
Art. No. (7545010419)

Polycraft Duroflex 40

Two component, Durable polyurethane

A : B 1 : 1 (By weight)	16-20 Minutes (At 25°C)	12 Hours (At 25°C)	Yellow/Amber (Colours may vary Slightly per batch)	Shore A40	 (25°C)	1.01kg by weight Equals approx- 1 Litre in Volume
Mix Ratio	Pot Life	Demould Time	Cured Colour	Hardness	Working Temperature	Approximate Density

Key Features

- **Low Viscosity**
- **Easy Mixing**
- **Low Odour**
- **Long Potlife**
- **Tough and Durable**
- **High Tear Strength**
- **Pigmentable**
- **Abrasion Resistant**

Technical Overview

Properties	Component	Value
Material	A	Polyol
	B	Isocyanate
	A+B Mix	Polyurethane
Colour	A	Amber
	B	Amber
Viscosity (mPas) @25°C	A	800 - 1100
	B	40 - 80
	A+B Mix	400 - 600
Density 25°C g/cm3	A	1.01 - 1.06
	B	0.98 - 1.03
	A+B Mix	0.99 - 1.04
Pot Life (Min.) 200g Mix	A+B Mix	16 - 20
Initial Cure (Hrs.) @25°C	A+B Mix	12
Full Cure (Days.) @25°C	A+B Mix	7

Properties	Unit	Value
Flexural Strength	Mpa	TBC
Flexural Modulus	MPa	TBC
Tear Strength	MPa	5.5 - 7.5
Tensile Strength	MPa	1.4 - 1.8
Elongation at Break	%	140 - 190
Heat Resistance (HDT)	°C	TBC
Shore Hardness	Shore A	40 - 45

Measure / Mix

Before use, ensure that parts A & B are at room temperature (20°C) minimum. Surface and air temperatures should be above 15°C during application and for the entire curing period. At higher or lower temperatures pot-life and cure time can be significantly affected.

Stir or shake both Part A & Part B thoroughly before dispensing into your mixing vessel. Part A & Part B are mixed by hand using a ratio of 1A:1B by weight. (Example 100g A : 100g B). Mixing accuracy is important as imprecise ratios will affect the cure.

Scrape the sides and bottom of the mixing vessel multiple times to ensure adequate mixing. Take care not to splash or spill.

Plastic mixing vessels / mixing utensils are recommended as wood or paper equipment can introduce moisture into the resin system.

Key Information

Mould Preparation

Moulds made from Metal, Wood or Resin will require a release agent. The Duroflex range work well with most condensation and addition cure rubbers however some condensation silicones are known to cause surface tackiness, its recommended to test if you are unsure, otherwise use addition curing rubber to prevent any issues.

Moisture

The Duroflex range are moisture sensitive and will absorb atmospheric moisture which may lead to curing issues. Seal containers immediately after use to prolong the shelf life. Consider a dry gas blanket spray to deaden the air gap in containers.

Cure Times

Although the rubber will reach its initial cure within 12 hours at 25°C, it will take on average 7 days at 25°C to reach its full hardness. When the rubber has only recently cured it will initially be softer and will take a few hours after its initial curing time before it begins to gain its full hardness. In the case of using in a silicone mould its highly recommended to preheat the mould prior to pouring the rubber. Post curing at elevated temperatures can significantly reduce the overall cure time.

Thickening for brushing

With additions of thickening fibres or fumed silica the Polycraft Duroflex 30 can be transformed into a brushable mix for application onto your silicone mould or overcoating etc. Ratios will vary depending on consistency required, Less = a loose paste / More = a thicker paste.

Pigmentation

This system will readily accept pigment. Its important to use polyurethane pigments or dyes only. Other pigment systems are likely to cause curing issues. When using a dye the natural colour of the resin will likely affect the final shade, experimentation is needed as in most cases to determine colour saturation and overall suitability etc.

Safety Precautions

Safety First! Goggles, gloves and appropriate mask whilst working in a well ventilated area is highly recommended. Always read the SDS before use.

Potlife / Working Time

Once Part A & Part B have been combined and mixed thoroughly you will have approximately 16 to 20 minutes before the rubber begins to set. Once the material begins to set, it will quickly become unusable. Mix only what you can use within the time frame. Bulk mix quantities may reduce potlife, Please reference technical overview for mix quantities and time values.

Product Overview

Polycraft Duroflex 40 is a fast curing rubber used in prototyping, mould making, production parts, tools, models, patterns and more. Tough and durable with a high tear strength and excellent abrasion resistance.