



PRODUCT DATA SHEET

Urepac Cast 1800 40

Product Description

Urepac Cast 1800 40 is a cold cure, two component polyurethane elastomer based on polyether polyol and MDI isocyanate. The system has been developed to be mixed and poured by manual "hand" mixing equipment as it has a slow reaction for optimal pot life. The elastomer was designed for use as a high performance cold castable elastomer with a low exotherm during cure.

Part A (Polyol) Specification:

210kg per 205lt Open top drum.

1050kg per 1000lt IBC.

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| Specific Gravity (22°C): | 1.04 +- 0.02 g/ml |
| Viscosity (Brookfield) (22°C): | 1000 +- 200 m.Pas |
| Appearance: | Clear Amber liquid |

Part B (Isocyanate) Specification:

230kg per 205lt Closed top drum.

1100kg per 1000lt IBC.

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|---------------------------------------|---------------------|
| Specific Gravity (22°C): | 1.10 +- 0.02 g/ml |
| Viscosity (Brookfield) (22°C): | 4000 +- 700 m.Pas |
| Appearance: | Clear Yellow liquid |

Processing Conditions:

Temperature

The temperature of both components should be conditioned to at least 20°C to ensure that cross-linking of the elastomer takes place. The optimal temperature of the components should be between 20-25°C to achieve repeatable results of the finished product. If the products are heated above this temperature, the reaction between both components will take place much quicker and therefore the mixture will have a reduced pot life. The mould should have a suitable release agent applied and be kept at a temperature of 30-35°C to achieve a good surface finish and reduced demould time.

Mix Ratio

It is imperative that the correct mix ratio of both components is maintained to within +-1% of the ratio specified to ensure that the components will completely react. The components are precisely manufactured so that all of the resin will react to completion, any variance from this will produce products with inferior physical properties, or in severe cases the product will not cure at all.

Mixing

For optimum results the isocyanate should be added to the polyol in a clean, dry mixing container, with the liquid level being no greater than 2/3 of the volume of the vessel, to ensure enough room for vigorous stirring of the components without spillage. The components should be stirred long enough to ensure a completely homogeneous mix of the components (taking care to mix the bottom and sides of the container), but as short as possible to reduce the amount of air entrapped in the mix. For optimum results the mixed elastomer should be degassed in a vacuum chamber. For machine mixing it is recommended that regular calibration shots are conducted to ensure that the correct mix ratio is being achieved.

Cured Elastomer Properties

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| Mix Ratio | 100 Polyol (Part A): 40 Isocyanate (Part B) (w/w) 100 Polyol: 42 Isocyanate (v/v) |
| Gel Time (22°C): | 30+-5 minutes |
| Demould time (Mould Temp. 35°C): | 120+ minutes |
| Density: | 1.07 +-0.02 g/ml |
| Shore Hardness: | 40+-5 Shore A |
| Tensile Strength: | 8 N/mm ² |
| Elongation at break: | 700+ % |
| Tear Strength: | 20 N/mm |

Storage and Handling

Component A should be stored under dry conditions out of direct sunlight between 18 and 25°C.
Component B should be stored separately from *Component A*, but under the same conditions.

- Both products will have a minimum shelf life of six months when stored under these conditions.
- It is imperative that **Component A** be thoroughly mixed prior to use.
- If **Component A** is held in storage tanks, the contents must be mixed at least once per day.

Please refer to the material safety data sheet for further advice on the safe handling of these products.

Transport Classification

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| Component A: | None |
| Component B: | None |