RAKU[®] TOOL IE-3072



IE-3080 / Phthalate Free / Low Viscosity

Rigid polyurethane

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Key Properties

• Excellent physical properties after RT cure

Applications

For room temperature hand-batch processing

- Free of mercury, MOCA or TDI
- Phthalate free

Processing Properties

| | | | Resin (Isocyanate) | Hardener (Polyol) |
|--------------------------|-------------|-------------------|-----------------------|----------------------|
| Mix ratio | | pbw | 100 | 92 |
| | | pbv | 100 | 100 |
| Density | ASTM D-792 | g/cm ³ | ca. 1.10 | ca. 1.03 |
| Viscosity at 77°F (25°C) | ASTM D-2393 | cP | ca. 40 | ca. 140 |

| | | | Mixture |
|------------------------------|-------------|-----|---------|
| Mix viscosity at 77°F (25°C) | ASTM D-2393 | сP | ca. 80 |
| Gel time at 77°F (25°C) | | min | 7-9 |
| Demold time at 77°F (25°C) | | min | 45-75 |

Cured / Mechanical Properties (approximate values)

| Cure: 7 days at 77°F | | | Cure |
|-------------------------------------|-------------|-------------------|-------------|
| Aspect | visual | | Translucent |
| Density | ASTM D-792 | g/cm ³ | 1.08 |
| Shore hardness D | ASTM D-2240 | | 65-75 |
| Deflection temperature, HDT (66psi) | ASTM D-648 | °F (°C) | 140 (60) |
| Tensile strength | ASTM D-638 | psi | 4,500 |
| Elongation at break | ASTM D-638 | % | 11 |
| Flexural strength | ASTM D-790 | psi | 7,800 |
| Flexural modulus | ASTM D-790 | psi | 200,000 |
| Notched Izod | ASTM D-256 | ft·lbf/in | 0.6 |
| Linear shrinkage | ASTM D-2566 | in/in | 0.001-0.005 |

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Processing

The processing and material temperature should be between 68-77°F (20-25°C). This system has been designed to ease the release of mixed air without degassing or pressure. However, for best results, de-air the material prior to casting, then pressurize to 60 psi. Agitate the hardener before use to ensure that the formula is homogeneous.

| Packaging | | |
|--------------------|------------|--|
| IE-3072 Quart Kit | 3.84 lbs. | |
| IE-3072 1 Gal. Kit | 15.36 lbs. | |
| IE-3072 5 Gal. Kit | 76.8 lbs. | |
| IE-3072 Drum Kit | 864 lbs. | |

Storage

Original containers should be kept tightly sealed and stored at ambient temperatures 59-86°F (15°C to 30°C). If properly stored the products have the shelf-life indicated on the product label. Partly used containers should always be sealed appropriately and used up as soon as possible.

Handling Precautions

Good workplace ventilation is to be ensured during processing. At the same time, the employer's liability insurance association's industrial hygiene safety regulations regarding the handling of reaction resins and their hardeners are to be observed. Please take heed of the appropriate safety data sheets.

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Our recommendations on the use of the material are based on many years of experience and current scientific and practical knowledge. They are, however, provided without any obligation on our part and do not relieve the buyer of the need for suitability tests. They do not constitute a legal relationship, nor are any protected third party rights whatsoever affected thereby.