

## Northstar Polymers MPP-D80B Rigid Polyurethane

Category : Polymer , Thermoset , Polyurethane, TS , Thermoset Polyurethane, Liquid

### Material Notes:

MPP-D80B has a high load-bearing property at hardness 80 D Durometer. This material has a relatively slow curing pattern. Whereas many polyurethane formulations of this hardness cure very fast thus are very difficult to hand-batch or to cast a larger part. MPP-D80B gives a long pot-life for ease of process. The combination of these properties makes this material ideal for prototyping molding to imitate hard plastic parts. The material will cure at room temperature. However, processing at a slightly elevated temperature (110 - 120 °F) will allow faster demolding time to achieve a better production rate. This material can be processed at either room temperature or using heat. Note: Heat distortion temperature of this material is relatively low and it is not suitable for application which require load bearing property at an elevated temperature range. Information provided by Northstar Polymers.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Northstar-Polymers-MPP-D80B-Rigid-Polyurethane.php](http://www.lookpolymers.com/polymer_Northstar-Polymers-MPP-D80B-Rigid-Polyurethane.php)

| Mechanical Properties | Metric   | English   | Comments   |
|-----------------------|----------|-----------|------------|
| Hardness, Shore D     | 80       | 80        | ASTM D2240 |
| Tensile Strength      | 55.2 MPa | 8000 psi  | ASTM D412  |
| Elongation at Break   | 5.0 %    | 5.0 %     | ASTM D412  |
| Flexural Strength     | 68.9 MPa | 10000 psi |            |
| Flexural Modulus      | 2.07 GPa | 300 ksi   |            |

| Thermal Properties                          | Metric  | English | Comments |
|---|---------|---------|----------|
| Deflection Temperature at 1.8 MPa (264 psi) | 60.0 °C | 140 °F  |          |

| Processing Properties  | Metric               | English              | Comments                 |
|------------------------|----------------------|----------------------|--------------------------|
| Processing Temperature | 21.1 - 32.2 °C       | 70.0 - 90.0 °F       | Prepolymer Temperature   |
|                        | 21.1 - 32.2 °C       | 70.0 - 90.0 °F       | Curing Agent Temperature |
| Mold Temperature       | 21.1 - 32.2 °C       | 70.0 - 90.0 °F       |                          |
| Cure Time              | 480 - 540 min        | 8.00 - 9.00 hour     | De-mold Time             |
|                        | @Temperature 25.0 °C | @Temperature 77.0 °F |                          |
| Pot Life               | 2880 - 4320 min      | 48.0 - 72.0 hour     | Complete Cure Cycle      |
|                        | @Temperature 25.0 °C | @Temperature 77.0 °F |                          |

| Descriptive Properties | Value   | Comments                         |
|------------------------|---------|----------------------------------|
| Curing Agent           | PND-011 |                                  |
| Prepolymer             | MPN-023 |                                  |
| Weight Ratio           | 1:0.454 | Prepolymer to Curing Agent Ratio |

## Contact Songhan Plastic Technology Co.,Ltd.

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