

BASF Ultramid® 8202 L Intermediate PA6 (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Unreinforced

Material Notes:

Description: Ultramid 8202 L-Intermediate is an unreinforced, low viscosity, non-lubricated PA6 injection molding homopolymer exhibiting excellent melt fluidity for filling thin sections. It is available in natural, heat stabilized and pigmented versions. It combines good strength, stiffness, and toughness as well as excellent heat, chemical and abrasion resistance. Applications: gears, fittings, casters, bearings, clips, fasteners, plugs, caps, and filter bowls. Information provided by BASF

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultramid-8202-L-Intermediate-PA6-Dry.php

| Physical Properties | Metric | English | Comments |
|------------------------------------|--------------|---------------------------|-----------------------|
| Density | 1.30 g/cc | 0.0470 lb/in ³ | ASTM D792 |
| Moisture Absorption at Equilibrium | 1.6 % | 1.6 % | 24 hour; ASTM D570 |
| | 2.7 % | 2.7 % | 50% RH; ASTM D570 |
| | 9.5 % | 9.5 % | Saturation; ASTM D570 |
| Linear Mold Shrinkage | 0.0305 cm/cm | 0.0305 in/in | 1/8" Bar |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|-----------------------|-----------------------|-----------|
| Hardness, Rockwell R | 119 | 119 | ASTM D785 |
| Tensile Strength at Break | 75.0 MPa | 10900 psi | ASTM D638 |
| | @Temperature -40.0 °C | @Temperature -40.0 °F | |
| Tensile Strength, Yield | 25.0 MPa | 3630 psi | ASTM D638 |
| | @Temperature 121 °C | @Temperature 250 °F | |
| | 35.0 MPa | 5080 psi | ASTM D638 |
| | @Temperature 80.0 °C | @Temperature 176 °F | |
| | 79.0 MPa | 11500 psi | ASTM D638 |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |
| | 125 MPa | 18100 psi | ASTM D638 |
| | @Temperature -40.0 °C | @Temperature -40.0 °F | |
| Elongation at Break | 55 % | 55 % | ASTM D638 |
| Elongation at Yield | 4.0 % | 4.0 % | |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |

| Mechanical Properties | Metric | English | Comments |
|----------------------------|------------------------|----------------------------|-----------|
| | @Temperature 121 °C | @Temperature 250 °F | |
| | 42 % | 42 % | |
| | @Temperature 80.0 °C | @Temperature 176 °F | |
| Flexural Strength | 20.0 MPa | 2900 psi | ASTM D790 |
| | @Temperature 194 °C | @Temperature 381 °F | |
| | 20.0 MPa | 2900 psi | ASTM D790 |
| | @Temperature 250 °C | @Temperature 482 °F | |
| | 30.0 MPa | 4350 psi | ASTM D790 |
| | @Temperature 149 °C | @Temperature 300 °F | |
| | 110 MPa | 16000 psi | ASTM D790 |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |
| | 170 MPa | 24700 psi | ASTM D790 |
| | @Temperature -40.0 °C | @Temperature -40.0 °F | |
| Flexural Modulus | 0.305 GPa | 44.2 ksi | ASTM D790 |
| | @Temperature 121 °C | @Temperature 250 °F | |
| | 0.350 GPa | 50.8 ksi | ASTM D790 |
| | @Temperature 90.0 °C | @Temperature 194 °F | |
| | 0.500 GPa | 72.5 ksi | ASTM D790 |
| | @Temperature 65.0 °C | @Temperature 149 °F | |
| | 2.83 GPa | 410 ksi | ASTM D790 |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |
| | 3.01 GPa | 437 ksi | ASTM D790 |
| | @Temperature -40.0 °C | @Temperature -40.0 °F | |
| Izod Impact, Notched (ISO) | 50.0 kJ/m ² | 23.8 ft-lb/in ² | ASTM D256 |
| | @Temperature -40.0 °C | @Temperature -40.0 °F | |
| | 60.0 kJ/m ² | 28.6 ft-lb/in ² | ASTM D256 |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |

| Thermal Properties | Metric | English | Comments |
|--------------------|--------------|----------------|-----------|
| CTE, linear | 83.0 µm/m-°C | 46.1 µin/in-°F | ASTM E831 |

| Melting Point Thermal Properties | 220 °C Metric | 428 °F English | ASTM D3418 Comments |
|--|------------------|-------------------|------------------------|
| Deflection Temperature at 0.46 MPa (66 psi) | 178 °C | 352 °F | ASTM D684 |
| Deflection Temperature at 1.8 MPa (264 psi) | 65.0 °C | 149 °F | ASTM D684 |

| Processing Properties | Metric | English | Comments |
|-----------------------|----------------|--------------|----------|
| Melt Temperature | 240 - 285 °C | 464 - 545 °F | |
| Mold Temperature | 65.0 - 80.0 °C | 149 - 176 °F | |
| Dry Time | 2 - 4 hour | 2 - 4 hour | |
| Moisture Content | <= 0.15 % | <= 0.15 % | |

| Descriptive Properties | Value | Comments |
|------------------------|---------------|----------|
| Color | Black | |
| Commercial Status | North America | |

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