# Ultramid® 8281 HS GP

Polyamide 6

BASF Corporation

## Message:

Ultramid 8281 HS GP is an unreinforced, heat stabilized PA6 rotomolding compound. It is available in natural and black and can be painted. It exhibits excellent balance of engineering properties including strength, stiffness, and toughness combined with excellent abrasion resistance and self lubricating characteristics. In addition, the heat stabilizer system extends its retention of properties at elevated temperatures. Chemical resistance is excellent to greases, oils and hydrocarbons. All data is from injection molded specimens with the exception of Drop Weight Impact.
Applications
Ultramid 8281 HS GP is generally recommended for applications such asfuel tanks, chemical storage tanks, hydraulic oil reservoirs, cyclones, and heat resistance containers.

| General Information | |
|---|---|
| Additive | Heat Stabilizer |
| Features | Good Abrasion Resistance |
| | Good Chemical Resistance |
| | Good Stiffness |
| | Good Strength |
| | Good Toughness |
| | Grease Resistant |
| | Heat Stabilized |
| | Hydrocarbon Resistant |
| | Oil Resistant |
| | Paintable |
| | Self Lubricating |
| Uses | Containers |
| | Fuel Tanks |
| | Tanks |
| Agency Ratings | EC 1907/2006 (REACH) |
| RoHS Compliance | RoHS Compliant |
| Appearance | Black |
| | Natural Color |
| Forms | Pellets |
| Processing Method | Rotational Molding |

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Specific Gravity | 1.13 | g/cm³ | ASTM D792 |
| Molding Shrinkage - Flow (3.18 mm) | 2.0 | % | |
| Water Absorption | | | ASTM D570 |
| 24 hr | 1.3 | % | |

| | | | |
|---|---|---|---|
| Saturation | 9.5 | % | |
| Equilibrium, 50% RH | 2.7 | % | |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Rockwell Hardness (R-Scale) | 116 | | ASTM D785 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Strength | | | ASTM D638 |
| Yield, -40°C | 114 | MPa | |
| Yield, 23°C | 72.0 | MPa | |
| Yield, 121°C | 20.0 | MPa | |
| Tensile Elongation (Break, 23°C) | > 100 | % | ASTM D638 |
| Flexural Modulus | | | ASTM D790 |
| -40°C | 2760 | MPa | |
| 23°C | 2690 | MPa | |
| 65°C | 530 | MPa | |
| 90°C | 360 | MPa | |
| 121°C | 300 | MPa | |
| Flexural Strength | | | ASTM D790 |
| -40°C | 154 | MPa | |
| 23°C | 100 | MPa | |
| 65°C | 30.0 | MPa | |
| 90°C | 20.0 | MPa | |
| 121°C | 15.0 | MPa | |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Notched Izod Impact | | | ASTM D256 |
| -40°C | 45 | J/m | |
| 23°C | 55 | J/m | |
| Drop Impact Resistance (23°C) | 67.8 | J | Internal Method |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 60.0 | °C | ASTM D648 |
| Peak Melting Temperature | 220 | °C | ASTM D3418 |
| CLTE - Flow | 7.4E-5 | cm/cm/°C | ASTM E831 |
| **Injection** | **Nominal Value** | **Unit** | |
| Drying Temperature | 80.0 | °C | |
| Drying Time | 2.0 to 4.0 | hr | |
| Suggested Max Moisture | 0.20 | % | |



Recommended distributors for this material

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