

# Ultramid® 8202 HS BK-102

## Polyamide 6



### Product Description

Ultramid 8202 HS BK-102 is an unreinforced, heat stabilized, pigmented black, low viscosity, general purpose injection molding PA6 exhibiting excellent fluidity for filling thin sections. It possesses the combination of strength, stiffness and toughness properties as well as excellent chemical, thermal and abrasion resistance. The heat stabilizer system extends its retention of properties at elevated temperatures.

### Applications

Ultramid 8202 HS BK-102 is generally recommended for applications such as drapery hardware, gears, fittings, furniture casters, bearings, handles, clips and fasteners.

| PHYSICAL                               | ISO Test Method | Property Value |             |
|----------------------------------------|-----------------|----------------|-------------|
| Density, g/cm                          | 1183            | 1.13           |             |
| Moisture, %                            | 62              |                |             |
| (24 Hour)                              |                 | 1.6            |             |
| (50% RH)                               |                 | 2.7            |             |
| (Saturation)                           |                 | 9.5            |             |
| MECHANICAL                             | ISO Test Method | Dry            | Conditioned |
| Tensile Modulus, MPa                   | 527             |                |             |
| 23C                                    |                 | 3,100          | 970         |
| Tensile stress at yield, MPa           | 527             |                |             |
| 23C                                    |                 | 85             | 36          |
| Tensile strain at yield, %             | 527             |                |             |
| 23C                                    |                 | 4              | 16          |
| Nominal strain at break, %             | 527             |                |             |
| 23C                                    |                 | 25             | >50         |
| Flexural Strength, MPa                 | 178             |                |             |
| 23C                                    |                 | 90             | 25          |
| Flexural Modulus, MPa                  | 178             |                |             |
| 23C                                    |                 | 2,650          | 770         |
| IMPACT                                 | ISO Test Method | Dry            | Conditioned |
| Izod Notched Impact, kJ/m <sup>2</sup> | 180             |                |             |
| 23C                                    |                 | 5.5            | -           |
| -40C                                   |                 | 4              | -           |
| Charpy Notched, kJ/m <sup>2</sup>      | 179             |                |             |
| 23C                                    |                 | 3              | -           |
| Charpy Unnotched, kJ/m <sup>2</sup>    | 179             |                |             |
| 23C                                    |                 | N              | -           |
| THERMAL                                | ISO Test Method | Dry            | Conditioned |
| Melting Point, C                       | 3146            | 220            | -           |
| HDT A, C                               | 75              | 60             | -           |
| UL RATINGS                             | UL Test Method  | Property Value |             |
| Flammability Rating, 1.5mm             | UL94            | V-2            |             |



|                                   |        |     |
|-----------------------------------|--------|-----|
| Relative Temperature Index, 1.5mm | UL746B |     |
| Mechanical w/o Impact, C          |        | 105 |
| Mechanical w/ Impact, C           |        | 105 |
| Electrical, C                     |        | 130 |

## Processing Guidelines

### Material Handling

Max. Water content: 0.15%

Product is supplied in sealed containers and drying prior to molding is not required. If drying becomes necessary, a dehumidifying or desiccant dryer operating at 80 degC (176 degF) is recommended. Drying time is dependent on moisture level, but 2-4 hours is generally sufficient. Further information concerning safe handling procedures can be obtained from the Material Safety Data Sheet. Alternatively, please contact your BASF representative.

### Typical Profile

Melt Temperature 240-285 degC (464-545 degF)

Mold Temperature 65-80 degC (149-176 degF)

Injection and Packing Pressure 35-125 bar (500-1500 psi)

### Mold Temperatures

A mold temperature of 65-80 degC (149-176 degF) is recommended, but temperatures of as low as 10 degC (50 degF) can be used where applicable.

### Pressures

Injection pressure controls the filling of the part and should be applied for 90% of ram travel.

Packing pressure affects the final part and can be used effectively in controlling sink marks and shrinkage. It should be applied and maintained until the gate area is completely frozen off.

### Fill Rate

Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing.

## Note

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