

**Product Information**

Aug 2013

**Ultramid® B3K**  
**Polyamide 6****Product Description**

Ultramid B3K is an easy flowing, stabilized PA6 product for fast processing.

**Applications**

Typical applications include technical parts with wall thicknesses greater than 2 mm.

| PHYSICAL                                             | ASTM Test Method | Property Value  |             |
|------------------------------------------------------|------------------|-----------------|-------------|
| Specific Gravity                                     | D-792            | 1.13            |             |
| Mold Shrinkage (1/8" bar, in/in)                     |                  | 0.01            |             |
| Moisture, %                                          | D-570            |                 |             |
| (50% RH)                                             |                  | 3               |             |
| (Saturation)                                         |                  | 9.5             |             |
| MECHANICAL                                           | ASTM Test Method | Dry             | Conditioned |
| Tensile Strength, Yield, MPa (psi)                   | D-638            |                 |             |
| 23C (73F)                                            |                  | 90 (13,100)     | -           |
| Elongation, Yield, %                                 | D-638            |                 |             |
| 23C (73F)                                            |                  | 3.7             | -           |
| Elongation, Break, %                                 | D-638            |                 |             |
| 23C (73F)                                            |                  | 20              | -           |
| Flexural Modulus, MPa (psi)                          | D-790            |                 |             |
| 23C (73F)                                            |                  | 2,600 (377,000) | -           |
| IMPACT                                               | ASTM Test Method | Dry             | Conditioned |
| Notched Izod Impact, J/M (ft-lbs/in)                 | D-256            |                 |             |
| 23C (73F)                                            |                  | 75 (1.4)        | -           |
| THERMAL                                              | ASTM Test Method | Dry             | Conditioned |
| Melting Point, C(F)                                  | D-3418           | 220 (428)       | -           |
| Heat Deflection @ 264 psi (1.8 MPa) C(F)             | D-648            | 65 (149)        | -           |
| Heat Deflection @ 66 psi (.45 MPa) C(F)              | D-648            | 160 (320)       | -           |
| Coef. of Linear Thermal Expansion, mm/mm C (in/in F) | E-831            | 0.4 X10-4       | -           |
| UL RATINGS                                           | UL Test Method   | Property Value  |             |
| Flammability Rating, 1.5mm                           | UL94             | HB              |             |
| Relative Temperature Index, 1.5mm                    | UL746B           |                 |             |
| Mechanical w/o Impact, C                             |                  | 115             |             |
| Mechanical w/ Impact, C                              |                  | 75              |             |
| Electrical, C                                        |                  | 130             |             |
| ELECTRICAL                                           | ASTM Test Method | Dry             | Conditioned |
| Volume Resistivity, 1.5 mm                           | D-257            | 1E13            | 1E10        |

**Processing Guidelines****Material Handling**

Max. Water content: 0.15%



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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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