



## Ultramid® C3U BK23079

BASF Corporation - Polyamide 66/6 Copolymer

Monday, November 4, 2019

### General Information

#### Product Description

Ultramid C3U BK23079 is an injection molding, general purpose PA6/66, pigmented black grade with improved flame retardance. The product is UL recognized as 94V0 at 0.4 mm minimum thickness.

#### Applications

It is used for impact resistant electrical insulating parts such as contact bases and plug connector strips.

#### General

|                   |                                                              |
|-------------------|--------------------------------------------------------------|
| Material Status   | • Commercial: Active                                         |
| Availability      | • North America                                              |
| Features          | • Flame Retardant • General Purpose • Good Impact Resistance |
| Uses              | • Electrical Parts • Electronic Insulation • General Purpose |
| Agency Ratings    | • EC 1907/2006 (REACH)                                       |
| RoHS Compliance   | • RoHS Compliant                                             |
| Appearance        | • Black                                                      |
| Forms             | • Pellets                                                    |
| Processing Method | • Injection Molding                                          |

### ASTM & ISO Properties <sup>1</sup>

| Physical                                          | Nominal Value | Unit                  | Test Method |
|---------------------------------------------------|---------------|-----------------------|-------------|
| Density                                           | 1.16          | g/cm <sup>3</sup>     | ISO 1183    |
| Water Absorption (Saturation, 73°F)               | 8.5           | %                     | ISO 62      |
| Water Absorption (Equilibrium, 73°F, 50% RH)      | 2.9           | %                     | ISO 62      |
| Mechanical                                        | Nominal Value | Unit                  | Test Method |
| Tensile Modulus (73°F)                            | 547000        | psi                   | ISO 527-2   |
| Tensile Stress (Yield, 73°F)                      | 12200         | psi                   | ISO 527-2   |
| Tensile Strain (Yield, 73°F)                      | 3.7           | %                     | ISO 527-2   |
| Impact                                            | Nominal Value | Unit                  | Test Method |
| Charpy Unnotched Impact Strength (73°F)           | 33            | ft-lb/in <sup>2</sup> | ISO 179     |
| Thermal                                           | Nominal Value | Unit                  | Test Method |
| Heat Deflection Temperature (264 psi, Unannealed) | 154           | °F                    | ISO 75-2/A  |
| Melting Temperature (DSC)                         | 469           | °F                    | ISO 3146    |
| RTI Elec                                          |               |                       | UL 746      |
| 0.015 in                                          | 230           | °F                    |             |
| 0.030 in                                          | 248           | °F                    |             |
| 0.06 in                                           | 248           | °F                    |             |
| 0.12 in                                           | 248           | °F                    |             |
| RTI Imp                                           |               |                       | UL 746      |
| 0.015 in                                          | 149           | °F                    |             |
| 0.030 in                                          | 221           | °F                    |             |
| 0.06 in                                           | 221           | °F                    |             |
| 0.12 in                                           | 221           | °F                    |             |

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| Thermal                    | Nominal Value | Unit | Test Method |
|----------------------------|---------------|------|-------------|
| RTI Str                    |               |      | UL 746      |
| 0.015 in                   | 149           | °F   |             |
| 0.030 in                   | 239           | °F   |             |
| 0.06 in                    | 248           | °F   |             |
| 0.12 in                    | 248           | °F   |             |
| Electrical                 | Nominal Value | Unit | Test Method |
| Comparative Tracking Index | 600           | V    | IEC 60112   |
| Flammability               | Nominal Value | Unit | Test Method |
| Flame Rating               |               |      | UL 94       |
| 0.015 in                   | V-0           |      |             |
| 0.030 in                   | V-0           |      |             |
| 0.06 in                    | V-0           |      |             |
| 0.12 in                    | V-0           |      |             |

## **Processing Information**

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 176           | °F   |
| Drying Time            | 2.0 to 4.0    | hr   |
| Suggested Max Moisture | 0.15          | %    |
| Processing (Melt) Temp | 482 to 518    | °F   |
| Mold Temperature       | 149 to 176    | °F   |
| Injection Pressure     | 508 to 1810   | psi  |
| Injection Rate         | Fast          |      |

## **Notes**

<sup>1</sup> Typical properties: these are not to be construed as specifications.