



# Ultradur® B 4300 G6 BK05110

BASF Corporation - Polybutylene Terephthalate

Monday, November 4, 2019

## General Information

### Product Description

Ultradur B 4300 G6 BK05110 is an easy flowing, pigmented black, injection molding PBT with 30% glass fiber reinforcement for rigid, tough, and dimensionally stable parts.

### Applications

Typical applications include windshield wiper arms, printed circuit boards, housings, consoles, contact carriers, and covers.

### General

|                           |                                                                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Material Status           | • Commercial: Active                                                                                                                                          |
| Availability              | • North America                                                                                                                                               |
| Filler / Reinforcement    | • Glass Fiber, 30% Filler by Weight                                                                                                                           |
| Features                  | • Good Dimensional Stability<br>• Good Flow<br>• Good Rigidity<br>• Good Toughness                                                                            |
| Uses                      | • Automotive Applications<br>• Housings<br>• Printed Circuit Boards<br>• Protective Coverings                                                                 |
| Agency Ratings            | • EC 1907/2006 (REACH)                                                                                                                                        |
| RoHS Compliance           | • RoHS Compliant                                                                                                                                              |
| Automotive Specifications | • FORD WSK-M4D608-A<br>• FORD WSK-M4D725-A<br>• GM GMP.PBT.010 Color: Black<br>• GM GMW16733P-PBT-GF30 Color: Black<br>• GM GMW16733P-PBT-GF30 Color: Natural |
| Appearance                | • Black                                                                                                                                                       |
| Forms                     | • Pellets                                                                                                                                                     |
| Processing Method         | • Injection Molding                                                                                                                                           |

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

| Physical                                          | Nominal Value | Unit                  | Test Method |
|---------------------------------------------------|---------------|-----------------------|-------------|
| Density                                           | 1.53          | g/cm <sup>3</sup>     | ISO 1183    |
| Water Absorption (24 hr, 73°F)                    | 0.20          | %                     | ISO 62      |
| Water Absorption (Saturation, 73°F)               | 0.40          | %                     | ISO 62      |
| Water Absorption (Equilibrium, 73°F, 50% RH)      | 0.20          | %                     | ISO 62      |
| Viscosity Number (Reduced Viscosity)              | 104.0         | ml/g                  | ISO 1628    |
| Mechanical                                        | Nominal Value | Unit                  | Test Method |
| Tensile Modulus (73°F)                            | 1.42E+6       | psi                   | ISO 527-2   |
| Tensile Stress (Break, 73°F)                      | 19700         | psi                   | ISO 527-2   |
| Tensile Strain (Break, 73°F)                      | 2.6           | %                     | ISO 527-2   |
| Flexural Modulus (73°F)                           | 1.28E+6       | psi                   | ISO 178     |
| Impact                                            | Nominal Value | Unit                  | Test Method |
| Charpy Notched Impact Strength (73°F)             | 4.3           | ft·lb/in <sup>2</sup> | ISO 179     |
| Charpy Unnotched Impact Strength (73°F)           | 30            | ft·lb/in <sup>2</sup> | ISO 179     |
| Notched Izod Impact Strength (73°F)               | 5.2           | ft·lb/in <sup>2</sup> | ISO 180     |
| Thermal                                           | Nominal Value | Unit                  | Test Method |
| Heat Deflection Temperature (264 psi, Unannealed) | 405           | °F                    | ISO 75-2/A  |
| Melting Temperature (DSC)                         | 433           | °F                    | ISO 3146    |
| Electrical                                        | Nominal Value | Unit                  | Test Method |
| Surface Resistivity                               | 1.0E+13       | ohms                  | IEC 60093   |

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| Electrical         | Nominal Value | Unit    | Test Method |
|--------------------|---------------|---------|-------------|
| Volume Resistivity | > 1.0E+15     | ohms·cm | IEC 60093   |

### Processing Information

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 212 to 248    | °F   |
| Drying Time            | 4.0           | hr   |
| Suggested Max Moisture | 0.040         | %    |
| Processing (Melt) Temp | 482 to 518    | °F   |
| Mold Temperature       | 140 to 212    | °F   |
| Injection Pressure     | 508 to 1810   | psi  |
| Injection Rate         | Fast          |      |
| Back Pressure          | < 145         | psi  |

### Notes

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