

# Ultradur® B 4300 G3

Polybutylene Terephthalate

BASF Corporation

## Message:

Easy flowing injection molding grade with 15 % glass fibers; for rigid, tough and dimensionally stable technical parts (eg timer dials, toggles, knobs, parts for thermostats, oven-door handles, toaster housings and grills).

| General Information                                 |                                   |                  |             |
|-----------------------------------------------------|-----------------------------------|------------------|-------------|
| UL YellowCard                                       | E41871-528070                     | E36632-101287332 |             |
| Filler / Reinforcement                              | Glass Fiber, 15% Filler by Weight |                  |             |
| Features                                            | Good Dimensional Stability        |                  |             |
|                                                     | Good Flow                         |                  |             |
|                                                     | Good Toughness                    |                  |             |
|                                                     | Medium Rigidity                   |                  |             |
| Uses                                                | Handles                           |                  |             |
|                                                     | Housings                          |                  |             |
|                                                     | Knobs                             |                  |             |
| Agency Ratings                                      | EC 1907/2006 (REACH)              |                  |             |
| RoHS Compliance                                     | RoHS Compliant                    |                  |             |
| Appearance                                          | Black                             |                  |             |
|                                                     | Colors Available                  |                  |             |
|                                                     | Natural Color                     |                  |             |
| Forms                                               | Pellets                           |                  |             |
| Processing Method                                   | Injection Molding                 |                  |             |
| Physical                                            | Nominal Value                     | Unit             | Test Method |
| Density                                             | 1.42                              | g/cm³            | ISO 1183    |
| Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)         | 15.0                              | cm³/10min        | ISO 1133    |
| Water Absorption                                    |                                   |                  | ISO 62      |
| Saturation, 23°C                                    | 0.40                              | %                |             |
| Equilibrium, 23°C, 50% RH                           | 0.20                              | %                |             |
| Viscosity Number <sup>1</sup>                       | 112                               | cm³/g            | ISO 307     |
| Mold Shrinkage <sup>2</sup>                         |                                   |                  |             |
| free, longitudinal                                  | 0.50                              | %                |             |
| free, transverse                                    | 1.4                               | %                |             |
| Maximum Service Temperature - short cycle operation | 210                               | °C               |             |

| Flammability by Electrical Sources of Ignition - Method BH (4.00 mm) | HB                                                |                   | IEC 60707   |
|----------------------------------------------------------------------|---------------------------------------------------|-------------------|-------------|
| Automotive Materials (> 1.00 mm)                                     | Pass                                              |                   | FMVSS 302   |
| Mechanical                                                           | Nominal Value                                     | Unit              | Test Method |
| Tensile Modulus                                                      | 6200                                              | MPa               | ISO 527-2   |
| Tensile Stress (Break)                                               | 100                                               | MPa               | ISO 527-2   |
| Tensile Strain (Break)                                               | 3.5                                               | %                 | ISO 527-2   |
| Impact                                                               | Nominal Value                                     | Unit              | Test Method |
| Charpy Notched Impact Strength (23°C)                                | 5.5                                               | kJ/m <sup>2</sup> | ISO 179/1eA |
| Charpy Unnotched Impact Strength (23°C)                              | 41                                                | kJ/m <sup>2</sup> | ISO 179/1eU |
| Thermal                                                              | Nominal Value                                     | Unit              | Test Method |
| Heat Deflection Temperature                                          |                                                   |                   |             |
| 0.45 MPa, Unannealed                                                 | 220                                               | °C                | ISO 75-2/B  |
| 1.8 MPa, Unannealed                                                  | 200                                               | °C                | ISO 75-2/A  |
| Melting Temperature                                                  | 223                                               | °C                | ISO 11357-3 |
| CLTE - Flow (23 to 80°C)                                             | 4.0E-5                                            | cm/cm/°C          | ISO 11359-2 |
| Electrical                                                           | Nominal Value                                     | Unit              | Test Method |
| Volume Resistivity                                                   | 1.0E+13                                           | ohms·cm           | IEC 60093   |
| Relative Permittivity                                                |                                                   |                   | IEC 60250   |
| 100 Hz                                                               | 0.00120                                           |                   |             |
| 1 MHz                                                                | 0.0150                                            |                   |             |
| Dissipation Factor                                                   |                                                   |                   | IEC 60250   |
| 100 Hz                                                               | 3.7E-4                                            |                   |             |
| 1 MHz                                                                | 3.7E-4                                            |                   |             |
| Flammability                                                         | Nominal Value                                     | Unit              | Test Method |
| Flame Rating                                                         |                                                   |                   | UL 94       |
| 0.800 mm                                                             | HB                                                |                   |             |
| 1.60 mm                                                              | HB                                                |                   |             |
| Injection                                                            | Nominal Value                                     | Unit              |             |
| Processing (Melt) Temp                                               | 260 to 280                                        | °C                |             |
| Mold Temperature                                                     | 60.0 to 100                                       | °C                |             |
| NOTE                                                                 |                                                   |                   |             |
| 1.                                                                   | solution 0,005 g/ml Phenole/1,2 Dichlorbenzol 1:1 |                   |             |
| 2.                                                                   | plate with film gate 150*150*3 mm <sup>3</sup>    |                   |             |

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