

# Tarnoform® 300 UV

Acetal (POM) Copolymer

Grupa Azoty S.A.

## Message:

Tarnoform® 300 UV is the fast cycling injection-moulding grade, good chemical resistance, modified with carbon black improving weather stability. This grade is available only in black colour.

| General Information                          |                          |                        |              |
|----------------------------------------------|--------------------------|------------------------|--------------|
| Additive                                     | Carbon Black             |                        |              |
| Features                                     | Fast Molding Cycle       |                        |              |
|                                              | Good Chemical Resistance |                        |              |
|                                              | Good Weather Resistance  |                        |              |
| Uses                                         | Automotive Applications  |                        |              |
| Appearance                                   | Black                    |                        |              |
| Forms                                        | Granules                 |                        |              |
| Processing Method                            | Injection Molding        |                        |              |
| Physical                                     | Nominal Value            | Unit                   | Test Method  |
| Density                                      | 1.41                     | g/cm <sup>3</sup>      | ISO 1183     |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)    | 8.0                      | g/10 min               | ISO 1133     |
| Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)  | 7.00                     | cm <sup>3</sup> /10min | ISO 1133     |
| Molding Shrinkage - Flow (2.00 mm)           | 2.0                      | %                      | ISO 294-4    |
| Water Absorption (Equilibrium, 23°C, 50% RH) | 0.20                     | %                      | ISO 62       |
| Hardness                                     | Nominal Value            | Unit                   | Test Method  |
| Ball Indentation Hardness (H 358/30)         | 145                      | MPa                    | ISO 2039-1   |
| Mechanical                                   | Nominal Value            | Unit                   | Test Method  |
| Tensile Modulus                              | 2600                     | MPa                    | ISO 527-2/1  |
| Tensile Stress (Yield)                       | 55.0                     | MPa                    | ISO 527-2/50 |
| Tensile Strain                               |                          |                        | ISO 527-2/50 |
| Yield                                        | 9.5                      | %                      |              |
| Break                                        | 45                       | %                      |              |
| Flexural Modulus <sup>1</sup>                | 2300                     | MPa                    | ISO 178      |
| Flexural Stress <sup>2</sup>                 | 60.0                     | MPa                    | ISO 178      |
| Impact                                       | Nominal Value            | Unit                   | Test Method  |
| Charpy Notched Impact Strength               | 5.5                      | kJ/m <sup>2</sup>      | ISO 179/1eA  |
| Charpy Unnotched Impact Strength             | 150                      | kJ/m <sup>2</sup>      | ISO 179/1eU  |
| Notched Izod Impact Strength                 | 6.0                      | kJ/m <sup>2</sup>      | ISO 180      |
| Thermal                                      | Nominal Value            | Unit                   | Test Method  |

| Heat Deflection Temperature (1.8 MPa, Unannealed) | 105                  | °C       | ISO 75-2/A  |
|---------------------------------------------------|----------------------|----------|-------------|
| Vicat Softening Temperature                       | 145                  | °C       | ISO 306/B   |
| Melting Temperature                               | 167                  | °C       | ISO 11357-3 |
| CLTE - Flow (23 to 55°C)                          | 1.1E-4               | cm/cm/°C | ISO 11359-2 |
| Limit of Temperature - a few hours operation      | 100                  | °C       |             |
| Burning Rate                                      | < 100                | mm/min   | FMVSS 302   |
| ISO Type                                          | POM-K, M-GLR, 03-002 |          | ISO 1874    |
| Electrical                                        | Nominal Value        | Unit     | Test Method |
| Surface Resistivity                               | 1.0E+14              | ohms     | IEC 60093   |
| Volume Resistivity                                | 1.0E+15              | ohms·cm  | IEC 60093   |
| Electric Strength (2.00 mm)                       | 25                   | kV/mm    | IEC 60243-1 |
| Dielectric Constant (1 Hz)                        | 3.90                 |          | IEC 60250   |
| Dissipation Factor (1 Hz)                         | 8.5E-3               |          | IEC 60250   |
| Comparative Tracking Index (Solution A)           | 600                  | V        | IEC 60112   |
| Flammability                                      | Nominal Value        | Unit     | Test Method |
| Flame Rating (3.20 mm)                            | HB                   |          | UL 94       |
| Injection                                         | Nominal Value        | Unit     |             |
| Drying Temperature                                | 100 to 120           | °C       |             |
| Drying Time                                       | 2.0 to 4.0           | hr       |             |
| Suggested Max Moisture                            | < 0.10               | %        |             |
| Suggested Max Regrind                             | 10                   | %        |             |
| Processing (Melt) Temp                            | 180 to 230           | °C       |             |
| Mold Temperature                                  | 60.0 to 120          | °C       |             |
| Injection Pressure                                | 60.0 to 120          | MPa      |             |
| Injection Rate                                    | Moderate-Fast        |          |             |
| NOTE                                              |                      |          |             |
| 1.                                                | 2.0 mm/min           |          |             |
| 2.                                                | 2.0 mm/min           |          |             |

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