

BASF Capron® 8233G 33% Glass-Filled Nylon 6 (Dry) (discontinued **)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , 30% Glass Fiber Filled

Material Notes:

Capron 8233G is a 33% glass fiber reinforced polyamide 6 molding compound offering excellent strength, stiffness, high temperature performance and dimensional stability. It is also available in heat stabilized (Capron 8233G HS) and/or pigmented versions. Capron 8233G is generally recommended for applications such as power tool housings, weed trimmer components, gears, automotive housings and under hood applications. Data provided by Allied Signal. Processing: Max. water content 0.12%. Product is supplied in sealed containers and drying is not required. If drying becomes necessary, a dehumidifying or desiccant dryer operating at 85°C (185 °F). Is recommended. Drying time is dependent on moisture level. Melt Temperature: 270-295 degC (518-563 degF). Mold Temperature: 80-95 degC (176-203 degF). Injection and Packing Pressure: 35-125 bar (500-1500psi) This product can be processed over a wide range of mold temperatures; however, for applications where aesthetics critical, a mold surface temperature of 80-95 degC (176-203 degF) is required. 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. Back pressure can be utilized to provide uniform melt consistency and reduce trapped air and gas. A maximum of 3.5 bar (50 psi) is recommended to minimize glass fiber breakage. Fast fill rates are recommended to insure uniform melt delivery to the cavity and prevent premature freezing. Surface appearance is directly affected by injection rate. Capron® is no longer a part of the BASF standard line. The BASF nylon products have been consolidated in the Ultramid ® line.

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Capron-8233G-33-Glass-Filled-Nylon-6-Dry-nbspdiscontinued-.php

| Physical Properties | Metric | English | Comments |
|------------------------------------|--------------|---------------------------|---------------------------------|
| Density | 1.38 g/cc | 0.0499 lb/in ³ | ISO data |
| Water Absorption | 1.1 % | 1.1 % | 24 hrs; ISO data |
| Moisture Absorption at Equilibrium | 1.8 % | 1.8 % | 50% RH; 23°C; ISO data |
| Water Absorption at Saturation | 6.4 % | 6.4 % | in water; 23°C; ISO data |
| Viscosity Measurement | 50 | 50 | Formic Acid Viscosity; ISO data |
| Linear Mold Shrinkage | 0.0020 cm/cm | 0.0020 in/in | ISO data |
| | 0.0030 cm/cm | 0.0030 in/in | ASTM data MD |
| Linear Mold Shrinkage, Transverse | 0.0090 cm/cm | 0.0090 in/in | ISO Data |

| Mechanical Properties | Metric | English | Comments |
|----------------------------|---------|-----------|---|
| Tensile Strength, Ultimate | 195 MPa | 28300 psi | Same value from ASTM and ISO tests; 5 mm/min. |
| Elongation at Break | 3.5 % | 3.5 % | ASTM, 5 mm/min |
| | 3.5 % | 3.5 % | ISO, 5 mm/min |

| Mechanical Properties | Metric Pa | English | Comments from ASTM and ISO test. |
|-------------------------|------------------------|----------------------------|----------------------------------|
| Flexural Yield Strength | 300 MPa | 43500 psi | ASTM Data |
| Flexural Modulus | 8.20 GPa | 1190 ksi | ISO Value |
| | 9.035 GPa | 1310 ksi | ASTM Value |
| Poissons Ratio | 0.35 | 0.35 | ISO data |
| Shear Modulus | 3.80 GPa | 551 ksi | calculated |
| Charpy Impact, Notched | 1.40 J/cm ² | 6.66 ft-lb/in ² | ISO Data |
| | 1.10 J/cm ² | 5.24 ft-lb/in ² | ISO data |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |

| Thermal Properties | Metric | English | Comments |
|---|----------------------|----------------------|-----------------------------------|
| CTE, linear, Parallel to Flow | 21.0 µm/m-°C | 11.7 µin/in-°F | ISO data |
| | @Temperature 20.0 °C | @Temperature 68.0 °F | |
| CTE, linear, Transverse to Flow | 70.0 µm/m-°C | 38.9 µin/in-°F | ISO data |
| | @Temperature 20.0 °C | @Temperature 68.0 °F | |
| Melting Point | 220 °C | 428 °F | ASTM and ISO test |
| Deflection Temperature at 0.46 MPa (66 psi) | 218 °C | 424 °F | Value for both ASTM and ISO data. |
| Deflection Temperature at 1.8 MPa (264 psi) | 207 °C | 405 °F | ISO data |
| | 210 °C | 410 °F | ASTM Data |
| Flammability, UL94 | HB | HB | |
| | @Thickness 0.710 mm | @Thickness 0.0280 in | |
| | HB | HB | |
| | @Thickness 3.00 mm | @Thickness 0.118 in | |

| Electrical Properties | Metric | English | Comments |
|------------------------|--------------------|--------------------|----------|
| Electrical Resistivity | >= 1.00e+15 ohm-cm | >= 1.00e+15 ohm-cm | ISO data |

| Processing Properties | Metric | English | Comments |
|-----------------------|---------|---------|---------------------|
| Drying Temperature | 85.0 °C | 185 °F | See Materials Notes |

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