

## BASF Capron® 5202 HS BK-102 Nylon 66 (Dry) (discontinued \*\*)

Category: Polymer, Thermoplastic, Nylon, Nylon 66, Nylon 66, Heat Stabilized

## **Material Notes:**

Capron 5202 HS BK-102 is an unfilled, heat stabilized, pigmented black nylon 6,6, injection molding compound. It combines strength and stiffness as well as excellent chemical resistance. The addition of heat stabilizer system extends its retention of properties at elevated temperatures. Capron 5202 HS Bk-102 is generally recommended for applications requiring slightly higher temperature and stiffness, such as engine component, power tools guides, straps and other hardware. Data provided by Allied Signal. Processing: Max. water content 0.25%. 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: 280-305 degC (536-581 degF). Mold Temperature: 80-95 degC (176-203 degF). Injection and Packing Pressure: 35-125 bar (500-1500psi) A mold temperature of 80-95 degC (176-203 degF) is recommended, but temperatures of as low as 45 degC (113 degF) and as high as 105 degC (221 degF) can be used where applicable. 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. Fast fill rates are recommended to insure uniform melt delivery to the cavity and prevent premature freezing. 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-5202-HS-BK-102-Nylon-66-Dry-nbspdiscontinued-.php

| Physical Properties                | Metric      | English       | Comments                        |
|------------------------------------|-------------|---------------|---------------------------------|
| Density                            | 1.14 g/cc   | 0.0412 lb/in³ | ISO data                        |
| Moisture Absorption at Equilibrium | 2.5 %       | 2.5 %         | 50% RH; 23°C; ISO data          |
| Water Absorption at Saturation     | 8.5 %       | 8.5 %         | in water; 23°C; ISO data        |
| Viscosity Measurement              | 55          | 55            | Formic Acid Viscosity; ISO data |
| Linear Mold Shrinkage              | 0.015 cm/cm | 0.015 in/in   | ASTM Data MD                    |

| Mechanical Properties   | Metric   | English   | Comments                 |
|-------------------------|----------|-----------|--------------------------|
| Tensile Strength, Yield | 85.0 MPa | 12300 psi | ASTM value at 50 mm/min. |
|                         | 86.0 MPa | 12500 psi | ISO value at 50 mm/min.  |
| Elongation at Break     | 15 %     | 15 %      | Nominal                  |
|                         | 15 %     | 15 %      | Nominal                  |
| Elongation at Yield     | 3.0 %    | 3.0 %     | ASTM Value at 50 mm/min. |
|                         | 5.0 %    | 5.0 %     | ISO Value at 50 mm/min.  |
| Flexural Yield Strength | 135 MPa  | 19600 psi | ASTM Data                |
| Flexural Modulus        |          |           | ASTM Data                |



| Mechanical Properties | 3 24 GPa<br>Metric | 470 kg<br>English | Comments |  |
|-----------------------|--------------------|-------------------|----------|--|
| Poissons Ratio        | 0.35               | 0.35              | ISO data |  |

| Thermal Properties                          | Metric              | English              | Comments          |
|---|---------------------|----------------------|-------------------|
| Melting Point                               | 260 °C              | 500 °F               | ASTM and ISO test |
| Deflection Temperature at 1.8 MPa (264 psi) | 80.0°C              | 176 °F               | ASTM Data         |
| Flammability, UL94                          | V-2                 | V-2                  |                   |
|   | @Thickness 0.700 mm | @Thickness 0.0276 in |                   |
|   | V-2                 | V-2                  |                   |
|   | @Thickness 3.00 mm  | @Thickness 0.118 in  |                   |

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

## **Contact Songhan Plastic Technology Co.,Ltd.**

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