

## CELANYL® SXB3 UV ND5012 Piano Black - PA6

### Description

(NKX-101 ND5012 Piano Black)

Celanyl SXB3 UV ND5012 Piano Black is a UV stabilized, unfilled polyamide with molded-in-color piano black grade

| Physical properties                                   | Value | Unit               | Test Standard   |
|-------------------------------------------------------|-------|--------------------|-----------------|
| Density                                               | 70.5  | lb/ft <sup>3</sup> | ISO 1183        |
| Molding shrinkage, parallel (flow)                    | 1.1   | %                  | ISO 294-4, 2577 |
| Molding shrinkage, transverse normal                  | 1.2   | %                  | ISO 294-4, 2577 |
| Water absorption, 23°C-sat                            | 9.6   | %                  | Sim. to ISO 62  |
| Humidity absorption, 23°C/50%RH                       | 3.5   | %                  | ISO 62          |
| Viscosity number (PA), H <sub>2</sub> SO <sub>4</sub> | 152   | ml/g               | ISO 307 (PA)    |

| Mechanical properties                 | Value         | Unit                  | Test Standard |
|---------------------------------------|---------------|-----------------------|---------------|
| Tensile modulus                       | 471374/145038 | psi                   | ISO 527-1, -2 |
| Tensile stress at yield, 50mm/min     | 12600/6090    | psi                   | ISO 527-1, -2 |
| Tensile strain at yield, 50mm/min     | 4/24          | %                     | ISO 527-1, -2 |
| Poissons ratio                        | 0.459         | -                     | ISO 527-1, -2 |
| Flexural modulus, 23°C                | 428000/123000 | psi                   | ISO 178       |
| Flexural strength, 23°C               | 14200/3630    | psi                   | ISO 178       |
| Charpy notched impact strength, 23°C  | 2.14/14.3     | ft-lb/in <sup>2</sup> | ISO 179/1eA   |
| Charpy notched impact strength, -30°C | 1.52/1.24     | ft-lb/in <sup>2</sup> | ISO 179/1eA   |
| Izod impact notched, 23°C             | 2.38/-        | ft-lb/in <sup>2</sup> | ISO 180/1A    |
| Izod impact notched, -40°C            | 2.43          | ft-lb/in <sup>2</sup> | ISO 180/1A    |

| Thermal properties            | Value | Unit | Test Standard  |
|-------------------------------|-------|------|----------------|
| Melting temperature, 20°C/min | 428   | °F   | ISO 11357-1/-3 |
| DTUL at 1.8 MPa               | 147   | °F   | ISO 75-1, -2   |
| DTUL at 0.45 MPa              | 342   | °F   | ISO 75-1, -2   |

### Other text information

### Injection Molding Preprocessing

Product needs to be dried before processing. A dehumidifying or desiccant dryer operating at 80 degC (176 degF) is recommended. The drying time will depend on the moisture level, we advise drying for 4-12h.

Please refer to SDS for safe material handling.

### Injection molding

Typical Profile

Melt Temperature 240-266 degC (464-511 degF)

Mold Temperature 65-110 degC (149-230 degF)

Fill Rate

Medium fill rates are recommended.

### Characteristics

|                                |                                                        |
|--------------------------------|--------------------------------------------------------|
| <b>Special Characteristics</b> | Auto spec approved, Specialty appearance, UV resistant |
| <b>Product Categories</b>      | Unfilled                                               |
| <b>Processing</b>              | Injection molding                                      |

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**CELANYL® SXB3 UV ND5012 Piano Black - PA6**

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**Other Approvals**

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| OEM                   | Specification | Additional Information              |
|-----------------------|---------------|-------------------------------------|
| Stellantis - Chrysler | CPN 5341      | UV stabilized special effects color |
| Toyota                | TSM5516G-1    | TIS# 01204-00B23                    |

**General Disclaimer**

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NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colorants or other additives may cause significant variations in data values. Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products. The products mentioned herein are not intended for use in medical or dental implants.

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