## Ver.22.01.B Material Technical Data Sheet (Powder)



## PA11(Black)

Ultrasint PA11, a bio-based material (castor oil), is an interesting alternative to PA12. It is good for applying to laser sintering process. The characteristics of Ultrasint PA11 (Black) are as follows:

- High elongation at break
- Elasticity and high impact resistance.
- High deformations (e.g. film hinges)
- High exposure to special surrounding (e.g. chemical, detergent, oil)
- High ductility
- Can be used for skin contact application

| IDENTIFICATION          |   |
|-------------------------|---|
| Product Name            | PA11 Black Polyamide Powder   |
| Material Name           | Ultrasint PA11 (Black)  |
| Application             | <ul> <li>Car interior parts</li> <li>Bumper components</li> <li>Film hinges</li> <li>Functional prototypes and spare parts</li> <li>Medium-loaded series parts</li> </ul> |
| For use with            | ☐ MfgPro230 xS  |
| SPECIFICATIONS          |   |
| Color                   | Black   |
| Density                 | 1.02 g/cm3  |
| Packing Density         | 520 g/cm3   |
| MECHANICAL PROPERTIES   |   |
| Tensile Strength (Mpa)  | 45  |
| Tensile Modulus (Mpa)   | 1100  |
| Elongation              | 45%   |
| Flexural Strength (Mpa) | N/A   |
| Flexural Modulus (Mpa)  | 1250  |
| Impact (KJ/m2)          | 7.7   |
| THERMAL PROPERTIES      |   |
| Melt Temperature        | 203°C / 397 °F  |
| Operating Temperature   | N/A   |
| Refresh Parameters      |   |
| Refreshing              | New 1 : Old 2   |
| Scaling                 |   |
| X:                      | 1.042   |
| Y:                      | 1.040   |
| Z:                      | 1.025   |