Preliminary Datasheet

## Ultramid®

ONE J 60X1 V15 NATURAL



PA66/6T-GF15 FR(40)

#### Product description

Ultramid® ONE J 60X1 V15 natural is a high temperature polyamide based on a non-halogenated flame retardant system, reinforced with 15% of glass fiber with best-in-class fire protection behavior, for injection moulding. This product has superior electrical performance compared to traditional high-performance plastics. Its low corrosion ensures processing tools longevity. This product, based on a high fluidity matrix, offers strong benefits in term of productivity and design freedom

The data provided are based on laboratory/experimental results. These data could be adjusted after industrial production.

#### **Injection Notes**

The material is supplied in airtight bags, ready for use. In case that the virgin material has absorbed moisture, it must be dried with a dehumidified air drying equipment, dew Point mini -20°C. Recommended time 2-4h.

#### Injection Advice:

All reinforced, flame retardant compounds generate some level of abrasion/corrosion to the steel processing equipment. These issues may be magnified by using incorrect processing conditions (temperatures, residence time, moisture level ...) during the moulding process. Therefore, BASF SE recommends you adhere to the processing conditions detailed in this technical data sheet. For equipment that comes into contact with molten flame retardant compounds, BASF SE advises you to use a steel with high chromium and high carbon content (having a minimum concentration of 16% Chromium) to prevent corrosion and abrasion. For the correct reference of steel associated to flame retardant compounds' processing, please refer to your equipment manufacturers. In the case of high requirements on surface quality a mould temperature of up to 120°C can be considered.

The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design.

#### Disclaimer

The information contained in this document is given in good faith based on our current knowledge. It is only an indication and it is in no way binding. This information must on no account be used as a substitutive for necessary prior tests which alone can ensure that a product is suitable for a given use. ANY WARRANTY OF PRODUCT PERFORMANCE, MERCHANDABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS EXPRESSLY EXCLUDED. Users are responsible for ensuring compliance with local legislation and for obtaining the necessary certifications and authorizations. Users are requested to check that they are in possession of the latest version of this document, and BASF SE is at their disposal to supply any additional information.

#### Safety Information

Detailed information regarding safety are available on the safety data sheet (MSDS). MSDS is sent with the first material order or available by contacting our customer services

#### **Regulations Compliance**

This product is not intended to be used for the following regulated market: food contact, drinking water, toys, cosmetics or medical devices.

#### **Customer Services**

Our customer services are not only concerned with manufacturing and supply of Engineering Plastics products. We are available to assist our customers in finding technical solutions that meet their requirements. Specific support is in particular offered on:

- Material selection
- Material testing
- Parts design advice, training for design engineers
- Part testing
- Design simulation
  Processing through different technologies
- Assembly and post-processing technology expertise
- Parts optimization through Computer Aided Design





# Ultramid<sup>®</sup> ONE J 60X1 V15 NATURAL

### Preliminary Datasheet <sup>3)</sup>



Typical values for uncoloured product at 23 °C <sup>1)</sup>	Test method	Unit	Values <sup>2)</sup>
General Properties			
Asia Pacific Processing: Injection moulding (M), Extrusion (E), Blow moulding (B) Colour; black (bk), uncoloured (un), coloured (co), transparent (tr) Pellets	- - - -		+ M un +
Physical			
Molding shrinkage (parallel) Molding shrinkage (normal) Water absorption, 24 h in water, 23 °C Moisture absorption, equilibrium 23°C/50% r.h Density	ISO 294-4 ISO 294-4 ISO 62 similar to ISO 62 ISO 1183	% % % kg/m³	0.50 1.00 0.75 1.70 1300 / -
Mechanical properties dry / cond.			
Tensile modulus Stress at break Strain at break Flexural modulus Flexural strength Charpy notched impact strength ISO 179/1eA (23°C) Charpy impact strength ISO 179-1eU (23°C)	ISO 527-1/-2 ISO 527-1/-2 ISO 527-1/-2 ISO 178 ISO 178 ISO 179/1eA ISO 179/1eU	MPa MPa MPa MPa kJ/m <sup>2</sup> kJ/m <sup>2</sup>	7600 / - 125 / - 2.8 / - 6300 / - 120 / - 6 / - 47 / -
Thermal properties			
HDT A (1.80 MPa) Melting temperature, DSC (10°C/min) RTI, electrical, d = 0.8 mm	ISO 75-1/-2 ISO 11357-1/-3 UL-746B	ວ° ວ° ວ°	245 278 150
Electrical properties			dry / cond.
Electric strength (d = 0.8 mm) Comparative tracking index, CTI, test liquid A	IEC 60243-1 IEC 60112	kV/mm -	35 / - 600 / -
Flammability			
Burning Behav. at 1.6 mm nom. thickn. Burning Behav. at thickness 0.8 mm Burning Behav. at thickness 3.2 mm Burning Behav. 5V at thickness 1.6 mm Glow Wire Flammability Index (0.8 mm) Glow Wire Flammability Index (1.6 mm) Glow Wire Flammability Index (3.2 mm) Glow Wire Ignition Temperature (0.8 mm) Glow Wire Ignition Temperature (1.6 mm)	IEC 60695-11-10 IEC 60695-11-10 UL-94, IEC 60695 IEC 60695-212 IEC 60695-2-12 IEC 60695-2-12 IEC 60695-2-13 IEC 60695-2-13	class class class class °C °C °C °C °C °C	V-0 V-0 5VA 960 960 750 725
Injection			
Pre/Post-processing, Pre-drying, Temperature Pre/Post-processing, max. allowed water content Injection molding cylinder temperature 1 (feed zone) Injection molding cylinder temperature 2 (compression) Injection molding cylinder temperature 3 (metering-zone, head room of screw) injection molding, Mold temperature, range	- - - - ISO 294	ပံ ပံ ပံ လို လို လို	80 0.12 285 - 295 290 - 300 290 - 300 90 - 110



