

Product description

Polyamide 66, Non halogen FR, UL94 V-0 flame retarded, for injection molding.
Ultramid® A 50X1 BLACK is phosphorus and halogen free flame retardant grade, offers excellent filling qualities combined with good stiffness.
- Connectors, Connector housing, Terminal blocks
This product is available in natural and black color.

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:

- For unfilled polyamides, BASF SE recommends the use of high alloy steel with a low chromium content. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (DIN Norm). 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 substitute for necessary prior tests which alone can ensure that a product is suitable for a given use. ANY WARRANTY OF PRODUCT PERFORMANCE, MERCHANTABILITY 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.

This grade complies with RoHS Directive 2011/65/EU, 2015/863 and local regulations as amended.

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® A 50X1 BLACK

Preliminary Datasheet³⁾



We create chemistry

Typical values for uncoloured product at 23 °C ¹⁾	Test method	Unit	Values ²⁾
General Properties			
Asia Pacific	-	-	+
Pellets	-	-	+
Physical			
Molding shrinkage (parallel)	ISO 294-4	%	0.95
Molding shrinkage (normal)	ISO 294-4	%	1.10
Density	ISO 1183	kg/m ³	1160 / -
Mechanical properties			dry / cond.
Yield stress, 50 mm/min	ISO 527-1/-2	MPa	76 / -
Tensile stress at yield, 2 in/min (ASTM)	ASTM D 638	MPa	80 / -
Yield strain, 50 mm/min	ISO 527-1/-2	%	11 / -
Tensile elongation at break, 2 in/min (ASTM)	ASTM D 638	%	15 / -
Flexural modulus	ISO 178	MPa	3000 / -
Flexural modulus (ASTM)	ASTM D 790	MPa	3800 / -
Flexural strength	ISO 178	MPa	105 / -
Flexural strength (ASTM)	ASTM D 790	MPa	115 / -
Izod notched impact strength ISO 180/A (23°C)	ISO 180/A	kJ/m ²	6 / -
Izod notched impact strength ASTM D 256 (23 °C)	ASTM D 256	J/m	65 / -
Thermal properties			
HDT B (0.45 MPa), ASTM	ASTM D 648	°C	235
HDT A (1.80 MPa)	ISO 75-1/-2	°C	85
Melting temperature, DSC (10°C/min)	ISO 11357-1/-3	°C	262
HDT A (1.80 MPa), ASTM	ASTM D 648	°C	80
Electrical properties			dry / cond.
Comparative tracking index, CTI, test liquid A	IEC 60112	-	600 / -
Flammability			
Burning Behav. at thickness 0.8 mm	UL-94, IEC 60695	class	V-0
Burning Behav. at thickness 1.6 mm	UL-94, IEC 60695	class	V-0
Glow Wire Flammability Index (0.8 mm)	IEC 60695-2-12	°C	960
Glow Wire Flammability Index (1.6 mm)	IEC 60695-2-12	°C	960
Glow Wire Flammability Index (3.2 mm)	IEC 60695-2-12	°C	960
Glow Wire Ignition Temperature (1.6 mm)	IEC 60695-2-13	°C	775
Burning behaviour at thickness h (3)	UL-94, IEC 60695	class	V-0
tested thickness (3)	UL-94, IEC 60695	mm	3.2
Injection			
Pre/Post-processing, Pre-drying, Temperature	-	°C	80
Pre/Post-processing, max. allowed water content	-	%	0.2
Injection molding cylinder temperature 1 (feed zone)	-	°C	260 - 270
Injection molding cylinder temperature 2 (compression)	-	°C	265 - 275
Injection molding cylinder temperature 3 (metering-zone, head room of screw)	-	°C	260 - 275
injection molding, Mold temperature, range	-	°C	60 - 80

Footnotes

1) If product name or properties don't state otherwise.

2) The asterisk symbol "*" signifies inapplicable properties.

3) The typical values of preliminary datasheets are not statistically firm.

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