Product Information **Ultramid®**

A 216 Y10 NATURAL

12/2020 **PA66**

Product description

Polyamide 66, Unreinforced, Self lubricating, containing molybdenum disulfide, for injection molding.
Ultramid® A 216 Y10 offers all of the primary properties of unreinforced polyamide 66 and mainly has, excellent surface properties:
- low coefficient of friction
- good resistance to wear

This grade is particularly suitable for molding of mechanical self lubricating parts, such as : gears, bearings, hub bushes.
This product is available in natural color (dark grey).

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 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.

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

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Product Information

Typical values for uncoloured product at 23 °C[1)]	Test method	Unit	Values[2)]
General Properties			
Asia Pacific	-	-	**+**
Pellets	-	-	**+**
Physical			
Water absorption, 24 h in water, 23 °C	ISO 62	%	**1.2**
Density	ISO 1183	kg/m³	**1140 / -**
Mechanical properties			**dry / cond.**
Tensile stress at yield, 2 in/min (ASTM)	ASTM D 638	MPa	**85 / -**
Tensile elongation at break, 2 in/min (ASTM)	ASTM D 638	%	**30 / -**
Flexural modulus (ASTM)	ASTM D 790	MPa	**3500 / -**
Flexural strength (ASTM)	ASTM D 790	MPa	**125 / -**
Izod notched impact strength ASTM D 256 (23 °C)	ASTM D 256	J/m	**50 / -**
Thermal properties			
Melting temperature, DSC (10°C/min)	ISO 11357-1/-3	°C	**262**
Coeff. of linear therm. expansion 23°C - 55°C (parallel) (CAMPUS)	ISO 11359-1/-2	E-6/K	**70**
HDT A (1.80 MPa), ASTM	ASTM D 648	°C	**83**
Electrical properties			**dry / cond.**
Surface resistivity	IEC 62631-3-2	Ohm	**1E13 / 1E11**
Volume resistivity	IEC 62631-3-1	Ohm*m	**1E13 / 1E9**
Electric strength (d = 0.8 mm)	IEC 60243-1	kV/mm	**30 / 28**
Comparative tracking index, CTI, test liquid A	IEC 60112	-	**600 / 600**
Flammability			
Burning Behav. at thickness 1.6 mm	UL-94, IEC 60695	class	**V-2**
Burning Behav. at thickness 3.2 mm	UL-94, IEC 60695	class	**V-2**
Oxygen index	ISO 4589-1/-2	%	**26**
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	**265 - 270**
Injection molding cylinder temperature 2 (compression)	-	°C	**270 - 280**
Injection molding cylinder temperature 3 (metering-zone, head room of screw)	-	°C	**280 - 290**
injection molding, Mold temperature, range	ISO 294	°C	**60 - 80**

Footnotes
1) If product name or properties don't state otherwise.
2) The asterisk symbol '*' signifies inapplicable properties.

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