Preliminary Datasheet

Ultramid®

8267G HS BK106 -A

06/2010

PA6-GF+MF40

BASF The Chemical Company

Product description

Product produced in Korea.

Mineral and glass fiber reinforced injection moulding grade is a heat stabilized and weather resistant grade. It has improved UV resistance and sink mark resistance.

The combination of mineral and glass fibers result in a high performance, low warp and cost effective engineering thermoplatics. It exhibits high strength, good UV resistance, rigidity and good heat distortion temperatures. It has a relatively high resistance to creep under load. The heat stabilizer system extends its retention of properties at elevated temperatures. It has a good chemical resistance to greases, oils and hydrocarbons.

The grade is generally recommended for applications such as rotors, wheels, rims, timing belt covers, automotive cooling fans, shrouds, and all external parts exposed to the environment.

Physical form and storage

Ultramid® is supplied dry and ready to use in moisture-proof packaging in the form of cylindrical or flat pellets. Its bulk density is about 0,7g/cm³. Standard packs are the special 25kg bag and the 1000kg bulk container (octagonal IBC= intermediate bulk container made from corrugated board with a liner bag). Subject to agreement other forms of packaging and shipment in tankers by road or rail are also possible. All containers are tightly sealed and should be opened only immediately prior to processing. To ensure that the perfectly dry material delivered cannot absorb moisture from the air the containers must be stored in dry rooms and always carefully sealed again after portions of material have been withdrawn. Ultramid® can be kept indefinitely in the undamaged bags. Experience has shown that product supplied in IBCs can be stored for about 3 months without any adverse effects on processing properties due to moisture absorption. Containers stored in cold rooms should be allowed to equilibrate to normal temperature so that no condensation forms on the pellets.

Product safety

Ultramid® melts are thermally stable at the usual temperature for PA66, PA6 and PA66/6 up to 310°C and 350°C for PA6/6T and do not give rise to hazards due to molecular degradation or the evolution of gases and vapors. Like all thermoplastic polymers Ultramid® decomposes on exposure to excessive thermal load, e.g. when it is overheated or as a result of cleaning by burning off. In such cases gaseous decomposition products are formed. Decomposition accelerates above 310°C (PA6/6T >350°C) approximately, the initial products formed being mainly carbon monoxide and ammonia, and caprolactam too in the case of PA6. At temperatures above about 350°C (PA6/6T>400°C) small quantities of pungent smelling vapors of aldehydes, amines and other nitrogenous decomposition products are also formed.
Further safety information see safety data sheet of the individual product.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.
In order to check the availability of products please contact us or our sales agency.

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Preliminary Datasheet [4)]

Typical values for uncoloured product at 23 °C[1)]	Test method[2)]	Unit	Values[3)]
Properties			
Polymer abbreviation	-	-	**PA6-GF+MF40**
Specific gravity ASTM	ASTM D 792	-	**1.48 / -**
Moisture absorption, 50% RH ASTM	ASTM D 570	%	**1.6**
Moisture absorption, Saturation ASTM	ASTM D 570	%	**5.7**
Moisture absorption, 24 hours ASTM	ASTM D 570	%	**0.9**
Processing			
injection molding, Melt temperature, range	-	°C	**270 - 295**
injection molding, Mold temperature, range	-	°C	**80 - 95**
Mechanical properties			**dry / cond.**
Tensile stress at yield, 2 in/min (ASTM)	ASTM D 638	MPa	**181 / -**
Percent elongation at break, 2 in/min (ASTM)	ASTM D 638	%	**2 / -**
Flexural strength (ASTM)	ASTM D 790	MPa	**290 / -**
Flexural modulus (ASTM)	ASTM D 790	MPa	**11000 / -**
Izod notched impact strength ASTM D 256 (23 °C)	ASTM D 256	J/m	**5.5 / -**
Thermal properties			
HDT A (1.80 MPa), ASTM	ASTM D 648	°C	**202**

Footnotes
1) If product name or properties don't state otherwise.
2) Specimens according to CAMPUS.
3) The asterisk symbol '*' signifies inapplicable properties.
4) The typical values of preliminary datasheets are not statistically firm.

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