Ultramid® A3EG7 EQ BK23189

PA66-GF35 BASF

Glass fiber reinforced injection molding grade for plastic parts in electronic components like housings for electronic control units or connectors. Ultramid EQ (Electronic Quality) materials offer a high purity regarding ionic and halogen containing compounds. This helps to minimize potential corrosion processes and to protect sensitive electronic components.
The product has a LS coloration (Laser Sensitive) and can be marked with Nd:YAG lasers.

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	25 / *	cm³/10min	ISO 1133
Temperature	275 / *	°C	-
Load	5 / *	kg	-
Molding shrinkage, parallel	0.5 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	1.1 / *	%	ISO 294-4, 2577

Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	11100 / 7850	MPa	ISO 527
Stress at Break	195 / 130	MPa	ISO 527
Strain at Break	3.3 / 6.2	%	ISO 527
Impact Strength (Charpy), +23°C	80 / 92	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	64 / -	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	8.7 / 12.7	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	7.7 / -	kJ/m²	ISO 179/1eA

Thermal Properties	dry / cond	Unit	Test Standard
ISO Data			
Melting Temperature (10°C/min)	260 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	250 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	260 / *	°C	ISO 75-1/-2

Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Volume Resistivity	>1E13 / -	Ohm*m	IEC 62631-3-1
Surface Resistivity	* / >1E15	Ohm	IEC 62631-3-2
Comparative tracking index	- / 575	-	IEC 60112

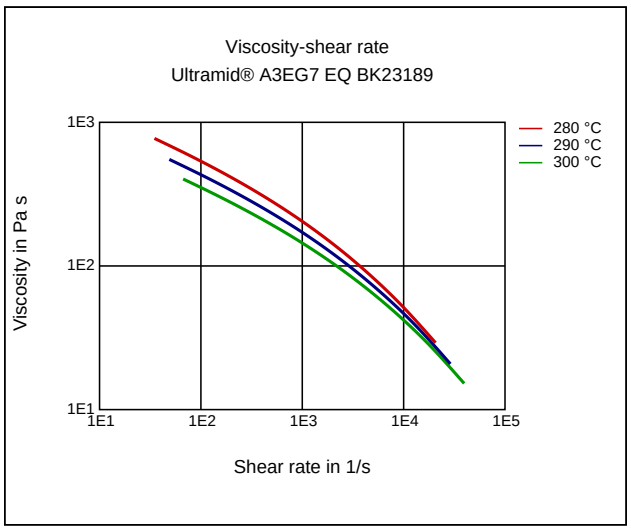
Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	5.39 / *	%	Sim. to ISO 62
Humidity absorption	1.53 / *	%	Sim. to ISO 62
Density	1410 / -	kg/m³	ISO 1183

Material Specific Properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	148 / *	cm³/g	ISO 307, 1157, 1628

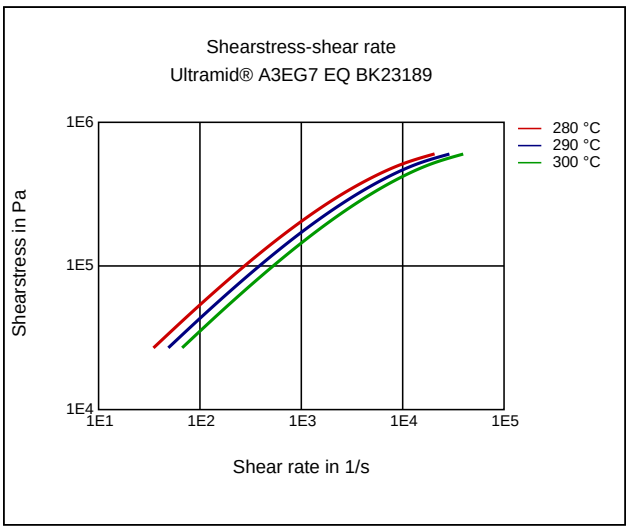
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.15	%	-
Melt temperature	280 - 300	°C	-
Mold temperature	80 - 90	°C	-

Diagrams

Viscosity-shear rate



Shearstress-shear rate



Characteristics

Processing
Injection Molding

Features
Laser Markable

Delivery form
Pellets, Black

Applications
Electrical and Electronical

Injection Molding

PREPROCESSING
Pre/Post-processing, max. allowed water content: .15 %
Pre/Post-processing, Pre-drying, Temperature: 80 °C
Pre/Post-processing, Pre-drying, Time: 4 h

PROCESSING
injection molding, Melt temperature, range: 280 - 300 °C
injection molding, Melt temperature, recommended: 290 °C
injection molding, Mold temperature, range: 80 - 90 °C
injection molding, Mold temperature, recommended: 80 °C
injection molding, Dwell time, thermoplastics: 10 min

Chemical Media Resistance

Acids

✔ Acetic Acid (5% by mass) (23°C)

Disclaimer

Important: irrespective of product type or designation, ALBIS does not recommend or support the use of any products it supplies which fall into the following medical, pharmaceutical or diagnostic application categories:

- risk class III applications according to EU directive 93/42/EEC
- any bodily implant application for greater than 30 days
- any critical component in any medical device that supports or sustains human life.

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