CAMPUS® Datasheet

Ultraform® N2320 008 AT - POM
BASF

Product Texts
Rapidly solidifying standard grade for injection molding.

Abbreviated designation according to ISO 1043: POM
Designation according to ISO 9988-1: POM-K, M-GNR, 03-002

Rheological properties	Value	Unit	Test Standard
Melt volume-flow rate, MVR	**7.5**	cm³/10min	ISO 1133
Temperature	**190**	°C	ISO 1133
Load	**2.16**	kg	ISO 1133
Molding shrinkage, parallel	**2.1**	%	ISO 294-4, 2577
Molding shrinkage, normal	**2.1**	%	ISO 294-4, 2577

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	**2600**	MPa	ISO 527-1/-2
Yield stress	**62**	MPa	ISO 527-1/-2
Yield strain	**9.4**	%	ISO 527-1/-2
Nominal strain at break	**27**	%	ISO 527-1/-2
Tensile creep modulus, 1h	**1800**	MPa	ISO 899-1
Tensile creep modulus, 1000h	**1300**	MPa	ISO 899-1
Charpy impact strength, +23°C	**240**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	**210**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	**6**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	**5**	kJ/m²	ISO 179/1eA

Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	**166**	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.80 MPa	**95**	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	**156**	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	**150**	°C	ISO 306
Coeff. of linear therm. expansion, parallel	**110**	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm nom. thickn.	**HB**	class	IEC 60695-11-10
Thickness tested (1.5)	**1.6**	mm	IEC 60695-11-10
Yellow Card available	**Yes**	-	-
Burning Behav. at thickness h	**HB**	class	IEC 60695-11-10
Thickness tested (h)	**0.8**	mm	IEC 60695-11-10
Yellow Card available	**Yes**	-	-
Oxygen index	**15**	%	ISO 4589-1/-2

Electrical properties	Value	Unit	Test Standard
Relative permittivity, 100Hz	**3.8**	-	IEC 62631-2-1
Relative permittivity, 1MHz	**3.8**	-	IEC 62631-2-1
Dissipation factor, 100Hz	**10**	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	**50**	E-4	IEC 62631-2-1
Volume resistivity	**1E11**	Ohm*m	IEC 62631-3-1
Surface resistivity	**1E13**	Ohm	IEC 62631-3-2
Electric strength	**40**	kV/mm	IEC 60243-1
Comparative tracking index	**600**	-	IEC 60112

Other properties	Value	Unit	Test Standard
Water absorption	**0.9**	%	Sim. to ISO 62
Humidity absorption	**0.2**	%	Sim. to ISO 62
Density	**1410**	kg/m³	ISO 1183

Rheological calculation properties	Value	Unit	Test Standard
Ejection temperature	**110**	°C	-

Test specimen production	Value	Unit	Test Standard
Injection Molding, melt temperature	**200**	°C	ISO 294
Injection Molding, mold temperature	**90**	°C	ISO 294
Injection Molding, injection velocity	**200**	mm/s	ISO 294

Characteristics

Processing
Injection Molding

Additives
Release agent

Delivery form
Pellets

Regional Availability
Asia Pacific

Other text information

Injection molding

PREPROCESSING
Pre/Post-processing, max. allowed water content: .2 %
Pre/Post-processing, Pre-drying, Temperature: 100 °C
Pre/Post-processing, Pre-drying, Time: 3 h

PROCESSING
injection molding, Melt temperature, range: 190 - 230 °C
injection molding, Melt temperature, recommended: 200 °C
injection molding, Mold temperature, range: 60 - 120 °C
injection molding, Mold temperature, recommended: 90 °C
injection molding, Dwell time, thermoplastics: 10 min

Processing

Usual single-flighted three-section screws with an effective screw length of at least 15 D, better 20 - 23 D are suitable for the injection molding of Ultraform.

Pretreatment

Granules or pellets in original packaging can be processed without any special pretreatment. Granules or pellets which have become moist due to prolonged or incorrect storage (e.g. by formation of condensed water) must be dried in dehumidifying or recirculating air dryers for approx. 3 hours at about 100 - 110 °C. The moisture content should not exceed 0.2 %.

Postprocessing

If parts were produced at a comparatively low mold temperature (e.g. in order to obtain short cycle times) and must not change their geometry in use thermal postprocessing inducing dimensional changes by postcrystallization may be necessary. In such cases parts should be stored in an oven with recirculated air at temperatures of 100 - 130 °C until dimensions don't change significantly any further. The time needed for this has to be determined experimentally.

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