

Ultraform® H2320 006 AT
POM

BASF

High-molecular-weight grade with somewhat increased flowability for injection molding of relatively thick-walled moldings.

Abbreviated designation according to ISO 1043-1: POM
Designation according to ISO 29988-POM-K,,M-GNR,1-2

| Rheological properties | Value | Unit | Test Standard |
|-----------------------------|-------|-----------|-----------------|
| ISO Data | | | |
| Melt volume-flow rate, MVR | 2.9 | cm³/10min | ISO 1133 |
| Temperature | 190 | °C | - |
| Load | 2.16 | kg | - |
| Molding shrinkage, parallel | 2.1 | % | ISO 294-4, 2577 |
| Molding shrinkage, normal | 2.1 | % | ISO 294-4, 2577 |

| Mechanical Properties | Value | Unit | Test Standard |
|---|-------|-------|---------------|
| ISO Data | | | |
| Tensile Modulus | 2600 | MPa | ISO 527 |
| Yield stress | 62 | MPa | ISO 527 |
| Yield strain | 11 | % | ISO 527 |
| Nominal strain at break | 30 | % | ISO 527 |
| Tensile Creep Modulus, 1h | 1800 | MPa | ISO 899-1 |
| Tensile Creep Modulus, 1000h | 1300 | MPa | ISO 899-1 |
| Impact Strength (Charpy), +23°C | 270 | kJ/m² | ISO 179/1eU |
| Impact Strength (Charpy), -30°C | 260 | kJ/m² | ISO 179/1eU |
| Notched Impact Strength (Charpy), +23°C | 6.5 | kJ/m² | ISO 179/1eA |
| Notched Impact Strength (Charpy), -30°C | 5.5 | kJ/m² | ISO 179/1eA |

| Thermal Properties | Value | Unit | Test Standard |
|---|-------|-------|----------------|
| ISO Data | | | |
| Melting Temperature (10°C/min) | 165 | °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 | 120 | E-6/K | ISO 11359-1/-2 |
| Burning Behav. at 1.5 mm Nom. Thickn. | HB | class | UL 94 |
| Thickness tested | 1.6 | mm | - |
| UL recognition | yes | - | - |
| Burning Behav. at thickness h | HB | class | UL 94 |
| Thickness tested | 0.8 | mm | - |
| UL recognition | yes | - | - |
| Oxygen index | 15 | % | ISO 4589-1/-2 |

| Electrical Properties | Value | Unit | Test Standard |
|------------------------------|-------|-------|---------------|
| ISO Data | | | |
| 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 |
|---------------------|-------|-------|----------------|
| ISO Data | | | |
| 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 |
|------------------------------------|-------|---------|---------------|
| ISO Data | | | |
| Thermal Conductivity of Melt | 0.14 | W/(m K) | - |

| | | | |
|-----------------------------|------|----------|---|
| Spec. heat capacity of melt | 2800 | J/(kg K) | - |
| Ejection temperature | 110 | °C | - |

| Test specimen production | Value | Unit | Test Standard |
|---------------------------------------|-------|------|---------------|
| ISO Data | | | |
| 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 |

| Processing Recommendation Injection Molding | Value | Unit | Test Standard |
|---|-----------|------|---------------|
| Pre-drying - Temperature | 100 | °C | - |
| Pre-drying - Time | 3 | h | - |
| Processing humidity | ≤0.2 | % | - |
| Melt temperature | 190 - 230 | °C | - |
| Mold temperature | 60 - 120 | °C | - |

Characteristics

Processing

Injection Molding, Film Extrusion, Profile Extrusion, Sheet Extrusion, Other Extrusion

Additives

Release agent

Delivery form

Pellets

Features

Copolymer

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

Film Extrusion

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

Extrusion, Blown film, Melt temperature: 175 - 180 °C
Extrusion, Flat film, Melt temperature: 175 - 180 °C

Processing

Ultraform can be processed to particular advantage using three-section screws having a total length L of 20 - 25 D and a constant pitch of about 1 D. However short-compression zone screws may also be used.

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

Due to the different solidification and cooling of the melt which varies according to time and place stresses may arise, especially in the case of large wall thicknesses. These stresses can be removed by subsequent heat treatment. Tempering is essential when high demands are placed on dimensional stability. It can be carried out in air, liquid wax or oil at temperatures of 130 - 150, usually 140 - 145 °C. Lower temperatures are not effective. Duration: 10 minutes per 1 mm wall thickness.

Other Extrusion

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

Extrusion, Prepreg, Melt temperature: 175 - 180 °C

Extrusion, Pipes, Melt temperature: 175 - 180 °C

Extrusion, cable sheathing, Melt temperature: 175 - 180 °C

Processing

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Profile extrusion

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

Extrusion, Profiles, Melt temperature: 175 - 180 °C

Processing

Ultraform can be processed to particular advantage using three-section screws having a total length L of 20 - 25 D and a constant pitch of about 1 D. However short-compression zone screws may also be used.

Pretreatment

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Sheet Extrusion

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

Extrusion, Plates, Melt temperature: 175 - 180 °C

Processing

Ultraform can be processed to particular advantage using three-section screws having a total length L of 20 - 25 D and a constant pitch of about 1 D. However short-compression zone screws may also be used.

Pretreatment

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Disclaimer

Liability Exclusion

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