Celanese
The chemistry inside innovation™

HOSTAFORM® LG450UV-D - POM

Description

Hostaform® acetal copolymer grade LG450UV-D is a specialty grade of acetal copolymer formulated to provide high flow with a reduced gloss finish and a UV stability necessary for interior automotive applications. Hostaform® LG450UV-D is specially suited for intricate applications such as speaker grills.

Physical properties	Value	Unit	Test Standard
Density	1380	kg/m³	ISO 1183
Melt flow rate, MFR	38	g/10min	ISO 1133
MFR temperature	190	°C	ISO 1133
MFR load	2.16	kg	ISO 1133
Melt volume rate, MVR	32	cm³/10min	ISO 1133
MVR temperature	190	°C	ISO 1133
MVR load	2.16	kg	ISO 1133
Molding shrinkage, parallel	2.1	%	ISO 294-4, 2577
Molding shrinkage, normal	1.9	%	ISO 294-4, 2577

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	2300	MPa	ISO 527-2/1A
Tensile stress at yield, 50mm/min	53	MPa	ISO 527-2/1A
Tensile strain at yield, 50mm/min	8	%	ISO 527-2/1A
Flexural modulus, 23°C	2300	MPa	ISO 178
Flexural stress at 3.5% strain	61	MPa	ISO 178
Charpy notched impact strength, 23°C	4	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	3.5	kJ/m²	ISO 179/1eA

Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	167	°C	ISO 11357-1/-3
DTUL at 1.8 MPa	90	°C	ISO 75-1, -2
DTUL at 0.45 MPa	152	°C	ISO 75-1, -2
Coeff. of linear therm expansion, parallel	1.1	E-4/°C	ISO 11359-2
Coeff. of linear therm expansion, normal	1.2	E-4/°C	ISO 11359-2

Typical injection moulding processing conditions

Pre Drying	Value	Unit	Test Standard
Drying time	3 - 4	h	-
Drying temperature	100 - 120	°C	-
Temperature	**Value**	**Unit**	**Test Standard**
Zone1 temperature	170 - 175	°C	-
Zone2 temperature	170 - 180	°C	-
Zone3 temperature	175 - 185	°C	-
Zone4 temperature	180 - 190	°C	-
Nozzle temperature	185 - 195	°C	-
Melt temperature	180 - 195	°C	-
Mold temperature	80 - 105	°C	-
Pressure	**Value**	**Unit**	**Test Standard**
Back pressure max.	40	bar	-
Speed	**Value**	**Unit**	**Test Standard**
Injection speed	slow	-	-

Other text information

Pre-drying

Predrying is required before processing to ensure a low gloss finish.

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Injection molding

Standard reciprocating screw injection molding machines with a high compression screw (minimum 3:1 and preferably 4:1) and low back pressure (0.35 Mpa/50 PSI) are favored. Using a low compression screw (I.E. general purpose 2:1 compression ratio) can result in unmelted particles and poor melt homogeneity. Using a high back pressure to make up for a low compression ratio may lead to excessive shear heating and deterioration of the material.

Melt Temperature: Preferred range 182-199 C (360-390 F). Melt temperature should never exceed 230 C (450 F).
Mold Surface Temperature: Preferred range 82-93 C (180-200 F) especially with wall thickness less than 1.5 mm (0.060 in.). May require mold temperature as high as 120 C (250 F) to reproduce mold surface or to assure minimal molded in stress. Wall thickness greater than 3mm (1/8 in.) may use a cooler (65 C/150 F) mold surface temperature and wall thickness over 6mm (1/4 in.) may use a cold mold surface down to 25 C (80 F). In general, mold surface temperatures lower than 82 C (180 F) may hinder weld line formation and produce a hazy surface or a surface with flow lines, pits and other included defects that can hinder part performance.

Characteristics

Special Characteristics	Delivery Form
UV resistant	Pellets

Processing

Injection molding

Contact Information

General Disclaimer

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colorants or other additives may cause significant variations in data values. Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products. The products mentioned herein are not intended for use in medical or dental implants.

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