

HOSTAFORM® LM90 - POM

Description

Hostaform® LM90 is a nominal 9 melt flow rate acetal copolymer which is capable of being permanently marked by a laser. Parts molded from Hostaform® LM90 can be laser marked with barcodes, identification numbers, designs, 2-D symbology, etc.

Physical properties	Value	Unit	Test Standard
Density	1410	kg/m ³	ISO 1183
Melt volume rate, MVR	8	cm ³ /10min	ISO 1133
MVR temperature	190	°C	ISO 1133
MVR load	2,16	kg	ISO 1133
Water absorption, 23°C-sat	0,75	%	ISO 62
Humidity absorption, 23°C/50%RH	0,2	%	ISO 62

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	2750	MPa	ISO 527-2/1A
Tensile stress at yield, 50mm/min	64	MPa	ISO 527-2/1A
Tensile strain at yield, 50mm/min	9	%	ISO 527-2/1A
Flexural modulus, 23°C	2700	MPa	ISO 178
Charpy notched impact strength, 23°C	5,5	kJ/m ²	ISO 179/1eA
Izod impact notched, 23°C	5,2	kJ/m ²	ISO 180/1A

Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	167	°C	ISO 11357-1/-3
DTUL at 1.8 MPa	98	°C	ISO 75-1, -2
Vicat softening temperature, 50°C/h 50N	161	°C	ISO 306
Coeff. of linear therm expansion, parallel	1	E-4/°C	ISO 11359-2
Coeff. of linear therm expansion, normal	1,1	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 - 180	°C	-
Zone2 temperature	180 - 190	°C	-
Zone3 temperature	180 - 190	°C	-
Zone4 temperature	190 - 200	°C	-
Nozzle temperature	190 - 200	°C	-
Melt temperature	180 - 200	°C	-
Mold temperature	80 - 120	°C	-
Hot runner temperature	180 - 200	°C	-
Pressure	Value	Unit	Test Standard
Back pressure max.	40	bar	-
Speed	Value	Unit	Test Standard
Injection speed	slow-medium	-	-

Other text information

Pre-drying

Drying is not normally required. If material has come in contact with moisture through improper storage or handling or through regrind use, drying may be necessary to prevent splay and odor problems.

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

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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

Laser markable

Processing

Injection molding

Product Categories

Specialty

Delivery Form

Pellets

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General Disclaimer

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