HOSTAFORM® LM140LG

laser markable, low gloss, good flow
Hostaform® acetal copolymer grade LM140LG is a laser markable specialty grade of acetal copolymer formulated to provide good flow with a low gloss finish.
Preliminary Data Sheet

Rheological properties

Melt volume-flow rate	13	cm^3/10min	ISO 1133
Temperature	190	°C	
Load	2.16	kg	

Typical mechanical properties

Tensile Modulus	1900	MPa	ISO 527-1/-2
Yield stress, 50mm/min	41	MPa	ISO 527-1/-2
Yield strain, 50mm/min	10	%	ISO 527-1/-2
Charpy notched impact strength, 23°C	3.1	kJ/m^2	ISO 179/1eA

Thermal properties

Melting temperature, 10°C/min	166	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	80	°C	ISO 75-1/-2

Other properties

Density	1330	kg/m^3	ISO 1183

Injection

Drying Temperature	100 - 120	°C
Drying Time, Dehumidified Dryer	3 - 4	h
Max. mould temperature	80 - 105	°C
Back pressure	4	MPa
Injection speed	slow	

Additional information

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

HOSTAFORM® LM140LG

	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.

Processing Texts

Pre-drying	Predrying is required before processing to ensure a low gloss finish.
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.
Injection molding Preprocessing	Drying is generally not required because Celcon® and Hostaform® acetal copolymers are not hydroscopic nor are they degraded by moisture during processing. Excessive moisture can lead to splay (silver streaking) in molded parts. For better uniformity in molding especially when using regrind or material that has been stored in containers open to the atmosphere, recommended drying conditions are 80 C (180 F) for 3hours. Desiccant hopper dryers are not required. Maximum water content = 0.35%
Injection molding Postprocessing	Postprocessing conditioning and moisturizing are not required. It may be necessary to fixture large or complicated parts with varying wall thickness to prevent warpage while cooling to ambient temperature.

Celanese
The chemistry inside innovation™

HOSTAFORM® LM140LG

Revised: 2023-02-23 Source: Celanese Materials Database