

HOSTAFORM® EC140XF - POM

Description

Hostaform® EC140XF is a conductive ESD grade of acetal copolymer for applications requiring dissipation of static build-up. EC140XF has an improved resistance to aggressive fuel blends.

Physical properties	Value	Unit	Test Standard
Density	1420	kg/m ³	ISO 1183
Melt flow rate, MFR	4,5	g/10min	ISO 1133
MFR temperature	190	°C	ISO 1133
MFR load	2,16	kg	ISO 1133
Melt volume rate, MVR	4	cm ³ /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	2700	MPa	ISO 527-2/1A
Tensile stress at yield, 50mm/min	53	MPa	ISO 527-2/1A
Tensile strain at yield, 50mm/min	4,7	%	ISO 527-2/1A
Tensile strain at break, 50mm/min	12	%	ISO 527-2/1A
Flexural modulus, 23°C	2650	MPa	ISO 178
Flexural stress at 3.5% strain	70	MPa	ISO 178
Charpy impact strength, 23°C	70	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	4	kJ/m ²	ISO 179/1eA
Izod impact notched, 23°C	4,5	kJ/m ²	ISO 180/1A
Rockwell hardness	75	M-Scale	ISO 2039-2

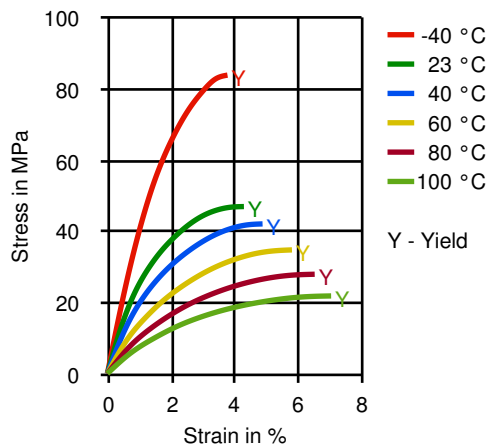
Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	166	°C	ISO 11357-1/-3
DTUL at 1.8 MPa	91	°C	ISO 75-1, -2
DTUL at 0.45 MPa	152	°C	ISO 75-1, -2
Vicat softening temperature, 50°C/h 50N	148	°C	ISO 306
Coeff. of linear therm expansion, parallel	1	E-4/°C	ISO 11359-2
Coeff. of linear therm expansion, normal	1,1	E-4/°C	ISO 11359-2

Electrical properties	Value	Unit	Test Standard
Volume resistivity	5	Ohm*m	IEC 60093
Surface resistivity	1000	Ohm	IEC 60093

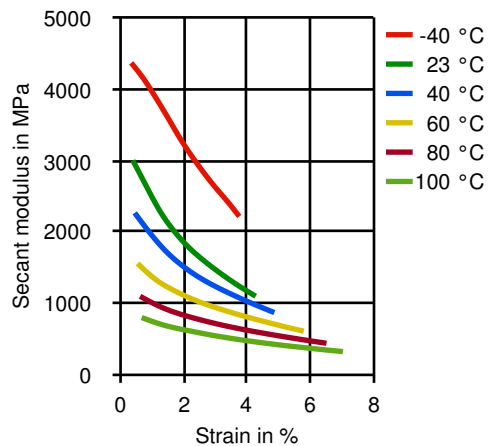
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Diagrams

Stress-strain



Secant modulus-strain



Typical injection moulding processing conditions

	Value	Unit	Test Standard
Pre Drying			
Drying time	3 - 4	h	-
Drying temperature	80 - 100	°C	-
Temperature			
Zone1 temperature	170 - 180	°C	-
Zone2 temperature	180 - 190	°C	-
Zone3 temperature	190 - 200	°C	-
Zone4 temperature	190 - 210	°C	-
Nozzle temperature	190 - 210	°C	-
Melt temperature	190 - 210	°C	-
Mold temperature	80 - 120	°C	-
Hot runner temperature	190 - 210	°C	-
Pressure			
Back pressure max.	20	bar	-

Other text information

Longer pre-drying times/storage

Predrying for conductive carbon based ESD grades is required.

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 Hostaform® 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 produce a hazy surface or a surface with flow lines, pits and other included defects.

Characteristics

Product Categories

Specialty

Delivery Form

Pellets

Processing

Injection molding

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