

**HOSTAFORM® EC140XF - POM**
**Description**

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

Physical properties	Value	Unit	Test Standard
Density	1420	kg/m <sup>3</sup>	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 <sup>3</sup> /10min	ISO 1133
MVR temperature	190	°C	ISO 1133
MVR load	2.16	kg	ISO 1133
Molding shrinkage, parallel (flow)	2.1	%	ISO 294-4, 2577
Molding shrinkage, transverse normal	1.9	%	ISO 294-4, 2577

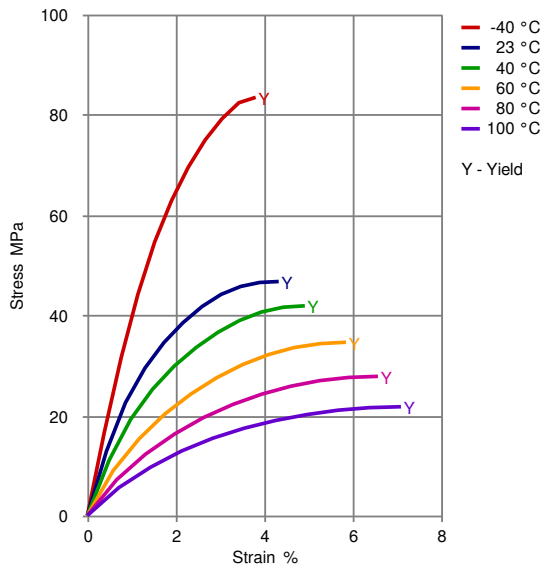
Mechanical properties	Value	Unit	Test Standard
Tensile modulus	2700	MPa	ISO 527-1, -2
Tensile stress at yield, 50mm/min	53	MPa	ISO 527-1, -2
Tensile strain at yield, 50mm/min	4.7	%	ISO 527-1, -2
Tensile strain at break, 50mm/min	12	%	ISO 527-1, -2
Flexural modulus, 23°C	2650	MPa	ISO 178
Flexural stress at 3.5% strain	70	MPa	ISO 178
Charpy impact strength, 23°C	70	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	4	kJ/m <sup>2</sup>	ISO 179/1eA
Izod impact notched, 23°C	4.5	kJ/m <sup>2</sup>	ISO 180/1A
Rockwell hardness (M-Scale)	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
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

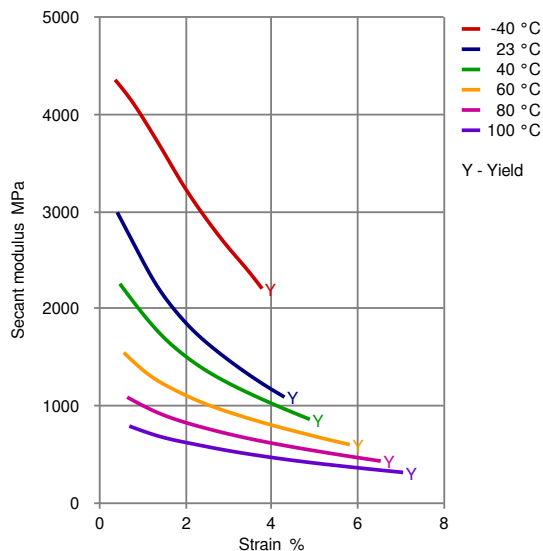
Electrical properties	Value	Unit	Test Standard
Volume resistivity, 23°C	5	Ohm*m	IEC 62631-3-1
Surface resistivity, 23°C	1000	Ohm	IEC 62631-3-2

**Diagrams**

**Stress-strain**



**Secant modulus-strain**



**Typical injection moulding processing conditions**

<b>Pre Drying</b>	<b>Value</b>	<b>Unit</b>
Drying time	3 - 4	h
Drying temperature	80 - 100	°C
<b>Temperature</b>	<b>Value</b>	<b>Unit</b>
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
<b>Pressure</b>	<b>Value</b>	<b>Unit</b>
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.)

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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.

### Injection Molding Preprocessing

Drying is highly recommended for conductive carbon based ESD grades of Hostaform®. 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 3 hours. 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.

### Characteristics

<b>Special Characteristics</b>	Auto spec approved, Electrostatic dissipation
<b>Product Categories</b>	Specialty
<b>Processing</b>	Injection molding
<b>Delivery Form</b>	Pellets

### Other Approvals

OEM	Specification	Additional Information
Bosch	N28 BN22-X005	Black
Stellantis - Chrysler	CPN 5291	Black
Continental	TST N 055 54.35	
Mercedes-Benz Group (Daimler)		Fuel (CD3068 BLK)
Stellantis - FCA Group	POM 80.45 E	
GM	GMW16278P-POM-Type C2	Black
Honda		Fuel spec
Renault		No spec listed
VW Group	TL52636-B	
Geely	Q/JLY J7110235B	2018

### Contact

Americas	Asia	Europe
8040 Dixie Highway Florence, KY 41042 USA Product Information Service t: +1-800-833-4882 t: +1-859-372-3244 Customer Service t: +1-800-526-4960 t: +1-859-372-3214 e: info-engineeredmaterials-am@celanese.com	4560 Jinke Road Zhang Jiang Hi Tech Park Shanghai 201210 PRC Customer Service t: +86 21 3861 9288 e: info-engineeredmaterials-asia@celanese.com	Am Unisys-Park 1 65843 Sulzbach, Germany Product Information Service t: +49-800-86427-531 t: +49-(0)-69-45009-1011 e: info-engineeredmaterials-eu@celanese.com

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