SKYPEL® G140D

SK Chemicals - Thermoplastic Polyester Elastomer

General Information

Product Description

SKYPEL G140D is a thermoplastic polyester elastomer resin superior heat resistance. SKYPEL G140D with a medium 40D hardness based on shore D scale is widely used for injection molding and extrusion applications.

OUTSTANDING CHARACTERISTICS AND PROPERTIES

SKYPEL G140D offers enhanced performance upon high thermal stability and flexural modulus. Outstanding characteristics of SKYPEL G140D are listed below.

1. Excellent mechanical properties such as high tensile strength and strain at break
2. High resistance to creep, impact, and flex-fatigue
3. Good thermal stability at high temperature
4. Excellent flexibility at low temperature
5. Good discoloration property at high temperature

PROCESSING

SKYPEL G140D should be sufficiently dried prior to processing. For effective drying using dehumidifying dryer, it should be held for 2 to 3 hours at 100 °C or overnight at least 70 °C. Pre-dried SKYPEL G140D in aluminum bag is also available for your convenience upon your choice.

General			
Features	• Creep Resistant • Fatigue Resistant • Good Color Stability	• Good Thermal Stability • High Heat Resistance • High Impact Resistance	• High Tensile Strength
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.16		ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	7.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow	8.0E-3	in/in	ASTM D955
Water Absorption (24 hr)	0.60	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [2]			ASTM D638
5.0% Strain, 0.0787 in, Injection Molded	341	psi	
10% Strain, 0.0787 in, Injection Molded	626	psi	
Tensile Strength [2] (Break, 0.0787 in, Injection Molded)	3840	psi	ASTM D638
Tensile Elongation [2]			ASTM D638
Break, 0.0787 in, Injection Molded	680	%	
Flexural Modulus [3]	9670	psi	ASTM D790
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tear Strength [4] (0.0787 in)	657	lbf/in	ASTM D1004
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (0.250 in)	No Break		ASTM D256

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Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore D	< 40		
Shore D, 15 sec	37		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	158	°F	ASTM D648
Peak Crystallization Temperature (DSC) [5]	315	°F	ASTM D3418
Additional Information	**Nominal Value**	**Unit**	**Test Method**
Resilience [6]	57	%	ASTM D2632

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	212	°F
Drying Time	2.0 to 3.0	hr
Rear Temperature	329	°F
Middle Temperature	347	°F
Front Temperature	347	°F
Nozzle Temperature	356	°F
Mold Temperature	77	°F
Extrusion	**Nominal Value**	**Unit**
Drying Temperature	212	°F
Drying Time	2.0 to 3.0	hr
Cylinder Zone 1 Temp.	302	°F
Cylinder Zone 3 Temp.	320	°F
Cylinder Zone 5 Temp.	329	°F
Melt Temperature	338	°F
Die Temperature	329	°F

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] Type IV, 2.0 in/min

[3] 0.051 in/min

[4] 2.0 in/min

[5] Heating rate 10°C/min.

[6] Vertical rebound