SKYPEL® G163D

SK Chemicals - Thermoplastic Polyester Elastomer

General Information

Product Description

SKYPEL G163D is a thermoplastic polyester elastomer resin with a medium 63D hardnessbased on shore D scale is widely used for injection molding and extrusion applications.

General

Forms	• Pellets	
Processing Method	• Extrusion	• Injection Molding

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.21		ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	14	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.015	in/in	ASTM D955
Water Absorption (24 hr)	0.30	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [2]			ASTM D638
5.0% Strain, 0.0787 in, Injection Molded	1560	psi	
10% Strain, 0.0787 in, Injection Molded	2490	psi	
Tensile Strength [2] (Break, 0.0787 in, Injection Molded)	6260	psi	ASTM D638
Tensile Elongation [2]			ASTM D638
Break, 0.0787 in, Injection Molded	500	%	
Flexural Modulus [3]	45500	psi	ASTM D790
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tear Strength [4] (0.0787 in)	1030	lbf/in	ASTM D1004
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (0.250 in)	No Break		ASTM D256
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D)	63		ASTM D2240
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Annealed)	266	°F	ASTM D648
Peak Crystallization Temperature (DSC) [5]	414	°F	ASTM D3418
Additional Information	**Nominal Value**	**Unit**	
Resilience [6]	53	%	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	212	°F
Drying Time	2.0 to 3.0	hr
Rear Temperature	428	°F
Middle Temperature	446	°F
Front Temperature	446	°F
Nozzle Temperature	455	°F
Mold Temperature	104	°F

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Extrusion	Nominal Value	Unit
Drying Temperature	212	°F
Drying Time	2.0 to 3.0	hr
Cylinder Zone 1 Temp.	410	°F
Cylinder Zone 3 Temp.	428	°F
Cylinder Zone 5 Temp.	437	°F
Melt Temperature	446	°F
Die Temperature	437	°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