

SKYPEL® P137DF

SK Chemicals - Thermoplastic Polyester Elastomer

General Information

Product Description

SKYPEL P137DF is a thermoplastic polyester elastomer resin superior heat resistance. SKYPEL P137DF with a medium 35D hardness based on shore D scale is widely used for injection molding and extrusion applications. And SKYPEL P137DF is also available to overmold TPU, PC, ABS, PC/ABS alloys.

General

Features	• High Heat Resistance
Forms	• Pellets
Processing Method	• Extrusion • Injection Molding

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.14		ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	24	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.013	in/in	ASTM D955
Water Absorption (24 hr)	1.5	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ²			ASTM D638
5.0% Strain, 0.0787 in, Injection Molded	284	psi	
10% Strain, 0.0787 in, Injection Molded	597	psi	
Tensile Strength ² (Break, 0.0787 in, Injection Molded)	2560	psi	ASTM D638
Tensile Elongation ²			ASTM D638
Break, 0.0787 in, Injection Molded	> 400	%	
Flexural Modulus ³	7110	psi	ASTM D790
Elastomers	Nominal Value	Unit	Test Method
Tear Strength ⁴ (0.0787 in)	457	lbf/in	ASTM D624
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)	< 35		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	122	°F	ASTM D648
Peak Crystallization Temperature (DSC) ⁵	392	°F	ASTM D3418
Additional Information	Nominal Value	Unit	Test Method
Resilience ⁶	48	%	ASTM D2632

Processing Information

Injection	Nominal Value	Unit
Rear Temperature	401	°F
Middle Temperature	419	°F
Front Temperature	419	°F
Nozzle Temperature	428	°F
Mold Temperature	95	°F

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Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	392	°F
Cylinder Zone 3 Temp.	419	°F
Cylinder Zone 5 Temp.	419	°F
Melt Temperature	428	°F
Die Temperature	419	°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