



Desmoflex® 50055 NAT XRD3 (PRELIMINARY DATA)

Teknor Apex Company - Modified Thermoplastic Polyurethane

General Information

Product Description

Desmoflex 50055 NAT XRD3 is a high performance thermoplastics elastomer that is designed for a variety of consumer applications including sport application. Desmoflex 50055 NAT XRD3 is a opaque, medium hardness, low density and good recovery grade that is designed for injection molding.

General

Material Status	• Preliminary Data		
Availability	• Asia Pacific	• Europe	
Features	• Good Colorability • Good Flexibility	• Good Tensile Strength • Low Density	• Medium Flow • Medium Hardness
Uses	• Consumer Applications	• Soft Touch Applications	• Sporting Goods
Appearance	• Colors Available	• Natural Color	
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.03		ASTM D792
Melt Mass-Flow Rate (MFR) ² (190°C/5.0 kg)	3.8	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ^{3, 4} (100% Strain)	203	psi	ASTM D412
Tensile Stress ^{3, 4} (300% Strain)	421	psi	ASTM D412
Tensile Strength ^{3, 4} (Break)	1670	psi	ASTM D412
Tensile Elongation ^{3, 4} (Break)	1100	%	ASTM D412
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness ⁴			ASTM D2240
Shore A, 1 sec, Injection Molded	50		
Shore A, 5 sec, Injection Molded	48		

Additional Information

Desmoflex® is a registered trademark of COVESTRO Group

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	149 to 176	°F
Drying Time	3.0 to 4.0	hr
Rear Temperature	320 to 392	°F
Middle Temperature	338 to 410	°F
Front Temperature	356 to 410	°F
Nozzle Temperature	356 to 410	°F
Processing (Melt) Temp	356 to 410	°F
Mold Temperature	68 to 122	°F

Injection Notes

Moisture can degrade the material. Drying is suggested. This can be accomplished by placing the material in a desiccant dryer for 3 to 4 hours, between 65°C to 80°C.

Notes

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

² After drying for 3hrs at 60°C.

³ Die C, 20 in/min

⁴ Aged for 12hrs at 90°C, follow by conditioning for 8hrs at room temperature.