



Monprene® RG-55482 X (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Monprene RG-55482 X is a high performance thermoplastic elastomer, available in NAT and colors, specifically designed for regulated applications including food contact packaging products. Monprene RG-55482 X is a high hardness, low density grade with excellent organoleptic properties and is suitable for injection molding and extrusion. Monprene RG-55482 X complies with various US FDA and European regulations and directives for food contact. Please contact Teknor Apex for a regulatory compliance letter.

General

Material Status	• Preliminary Data		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Bondability • Food Contact Acceptable • Good Adhesion • Good Colorability	• Good Melt Strength • Good Organoleptic Properties • Good Processability • Halogen Free	• High Hardness • Low Compression Set • Low Density
Uses	• Closures • Consumer Applications • Cookware Handles • Cups • Fluid Handling	• Food Containers • Food Packaging • Food Service Applications • Gaskets • Kitchenware	• Lids • Non-specific Food Applications • Overmolding • Toys
Agency Ratings	• EU Food Contact, Unspecified Rating	• FDA Food Contact, Unspecified Rating	
RoHS Compliance	• RoHS Compliant		
Appearance	• Colors Available	• Natural Color	
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.912		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	2.0	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ^{2,3} (100% Strain)	760	psi	ASTM D412
Tensile Strength (Break)	1080	psi	ASTM D412
Tensile Elongation ^{2,3} (Break)	360	%	ASTM D412
Tear Strength ^{2,3}	260	lbf/in	ASTM D624
Compression Set ^{4,3}			ASTM D395B
73°F, 22 hr	28	%	
158°F, 22 hr	73	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness ³			ASTM D2240
Shore A, 1 sec, Injection Molded	84		
Shore A, 5 sec, Injection Molded	82		

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	320 to 360	°F
Middle Temperature	330 to 370	°F
Front Temperature	340 to 380	°F
Nozzle Temperature	350 to 390	°F
Processing (Melt) Temp	350 to 390	°F
Mold Temperature	95 to 120	°F
Injection Pressure	200 to 800	psi
Injection Rate	Fast	
Back Pressure	25.0 to 100	psi
Screw Speed	50 to 100	rpm
Cushion	0.150 to 1.00	in

Injection Notes

Drying is not necessary. However, if moisture is a problem, dry the pellets for 2 to 4 hours at 150°F (65°C).

Extrusion

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	340 to 380	°F
Cylinder Zone 2 Temp.	350 to 385	°F
Cylinder Zone 3 Temp.	350 to 385	°F
Cylinder Zone 4 Temp.	360 to 390	°F
Cylinder Zone 5 Temp.	360 to 390	°F
Die Temperature	370 to 395	°F

Extrusion Notes

Screw Speed: 30 to 100 rpm

Notes

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

² Die C, 20 in/min

³ TBD

⁴ Type 1