



Monprene® IN-12086

Teknor Apex Company - Thermoplastic Elastomer

General Information

Product Description

Monprene IN-12086 is a general purpose thermoplastic elastomer designed for a variety of consumer and industrial applications, including seals and gaskets. Monprene IN-12086 is a low density, high hardness, RoHS compliant grade suitable for injection molding and extrusion.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Bondability • Good Colorability • Good Mold Release • Good Moldability	• Good Processability • High Hardness • High Tensile Strength • Low Density	• Medium Flow • Without Fillers
Uses	• Consumer Applications • Gaskets • Handles	• Industrial Applications • Safety Equipment • Sporting Goods	• Tubing • Writing Instruments
RoHS Compliance	• RoHS Compliant		
Appearance	• Colors Available	• Natural Color	• Opaque
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.890		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	10	g/10 min	ASTM D1238
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ²			ASTM D412
Across Flow : 100% Strain	741	psi	
Flow : 100% Strain	942	psi	
Tensile Stress ²			ASTM D412
Across Flow : 300% Strain	905	psi	
Flow : 300% Strain	1150	psi	
Tensile Strength ²			ASTM D412
Across Flow : Break	3060	psi	
Flow : Break	1710	psi	
Tensile Elongation ²			ASTM D412
Across Flow : Break	820	%	
Flow : Break	580	%	
Tear Strength ²			ASTM D624
Across Flow	394	lbf/in	
Flow	371	lbf/in	
Compression Set ³			ASTM D395B
73°F, 22 hr	37	%	
158°F, 22 hr	66	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Injection Molded	90		
Shore A, 5 sec, Injection Molded	87		

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Processing Information

Injection	Nominal Value	Unit
Rear Temperature	400 to 440	°F
Middle Temperature	400 to 440	°F
Front Temperature	400 to 440	°F
Nozzle Temperature	400 to 440	°F
Processing (Melt) Temp	400 to 440	°F
Mold Temperature	60 to 90	°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.	380 to 420	°F
Cylinder Zone 2 Temp.	380 to 420	°F
Cylinder Zone 3 Temp.	380 to 420	°F
Cylinder Zone 4 Temp.	380 to 420	°F
Cylinder Zone 5 Temp.	380 to 420	°F
Die Temperature	380 to 420	°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 Type 1