

Marlex® HMN TR-945

High Density Polyethylene

Chevron Phillips Chemical Company LLC

Message:

Marlex® HMN TR-945 is a High Density Polyethylene material. It is available in Latin America or North America for rotational molding.

Important attributes of Marlex® HMN TR-945 are:

- Good UV Resistance
- Hexene Comonomer
- High ESCR (Stress Crack Resistant)
- High Stiffness
- Impact Resistant
- Typical applications include:
 - Automotive
 - Food Contact Applications
 - Tanks

General Information			
Additive	UV Stabilizer		
Features	Good Flow		
	Good Impact Resistance		
	Good UV Resistance		
	Hexene Comonomer		
	High ESCR (Stress Crack Resist.)		
	High Stiffness		
Uses	Tanks		
Agency Ratings	ASTM D 2565		
	ASTM D 4976-PE233		
	FDA 21 CFR 177.1520(c) 3.2a 2		
Forms	Pellets		
Processing Method	Rotational Molding		
Physical	Nominal Value	Unit	Test Method
Density	0.945	g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	6.0	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance			ASTM D1693A
10% Igepal, Compression Molded, F50	25.0	hr	
100% Igepal, Compression Molded, F50	70.0	hr	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, Compression Molded)	63		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method

Tensile Strength ¹ (Yield, 3.17 mm, Rotational Molded)	20.0	MPa	ASTM D638
Tensile Elongation ² (Break, 3.17 mm, Rotational Molded)	460	%	ASTM D638
Flexural Modulus ³			ASTM D790
2% Secant : 3.17 mm, Rotational Molded	740	MPa	
Tangent : 3.17 mm, Rotational Molded	910	MPa	
Impact	Nominal Value	Unit	Test Method
ARM Impact			
-40°C, 3.20 mm	92.0	J	
-40°C, 6.35 mm	223	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 3.17 mm, Rotational Molded	64.0	°C	
1.8 MPa, Unannealed, 3.17 mm, Rotational Molded	44.0	°C	
Brittleness Temperature	-75.0	°C	ASTM D746A
Vicat Softening Temperature	118	°C	ASTM D1525 ⁴
Melting Temperature	130	°C	
Peak Crystallization Temperature (DSC)	113	°C	ASTM D3418
NOTE			
1.	Type IV, 51 mm/min		
2.	Type IV, 51 mm/min		
3.	13 mm/min		
4.	Rate A (50°C/h), Loading 1 (10 N)		

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