

Marlex® HMN TR-942

High Density Polyethylene
Chevron Phillips Chemical Company LLC

Message:

Marlex® HMN TR-942 is a High Density Polyethylene material. It is available in Latin America or North America for rotational molding.

Important attributes of Marlex® HMN TR-942 are:

- Good UV Resistance
- Hexene Comonomer
- High ESCR (Stress Crack Resistant)
- Impact Resistant
- UV Stabilized

Typical applications include:

- Agricultural
- Automotive
- Food Contact Applications
- Plumbing/Piping/Potable Water Tanks

General Information			
Additive	UV Stabilizer		
Features	Good Flow		
	Good Impact Resistance		
	Good UV Resistance		
	Hexene Comonomer		
	High ESCR (Stress Crack Resist.)		
Uses	Agricultural Applications		
	Tanks		
Agency Ratings	ASTM D 2565		
	ASTM D 4976-PE233		
	FDA 21 CFR 177.1520(c) 3.2a 2		
	NSF 61		
Forms	Pellets		
Processing Method	Rotational Molding		
Physical	Nominal Value	Unit	Test Method
Density	0.943	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	2.0	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance			ASTM D1693A
10% Igepal, Compression Molded, F50	250	hr	
100% Igepal, Compression Molded, F50	700	hr	
Hardness	Nominal Value	Unit	Test Method

Durometer Hardness (Shore D, Compression Molded)	61		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹ (Yield, 3.17 mm, Rotational Molded)	21.0	MPa	ASTM D638
Tensile Elongation ² (Break, 3.17 mm, Rotational Molded)	720	%	ASTM D638
Flexural Modulus ³			ASTM D790
2% Secant : 3.17 mm, Rotational Molded	720	MPa	
Tangent : 3.17 mm, Rotational Molded	860	MPa	
Impact	Nominal Value	Unit	Test Method
ARM Impact			
-40°C, 3.20 mm	92.0	J	
-40°C, 6.35 mm	244	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	120	°C	ASTM D1525 ⁴
Peak Melting Temperature	130	°C	ASTM D3418
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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