Marlex® HMN TR-942G

High Density Polyethylene

Chevron Phillips Chemical Company LLC

Message:

These hexene copolymers are tailored for rotational molding applications that require:
Wide process windows
Excellent impact strength
Good flow
Good ESCR
These resins are available in:
Pellet form - HMN TR-942
35 US mesh powder - HMN TR-942G
Typical applications for HMN TR-942 and HMN TR-942G include items such as:
Potable water and chemical tanks
Agricultural equipment
These resins meet these specifications:
ASTM D4976 - PE 233
FDA 21 CFR 177.1520(c) 3.2a, use conditions B through H per 21 CFR 176.170(c) Table 2. Single use articles contacting food types I, II, IV-B, VI-A, VI-B, VII-B, and VIII. Repeated use articles contacting all food types defined in 21 CFR 176.170(c) Table 1.
FMVSS.302 burn test
NSF / ANSI Standard 61 for potable water (CLD 23)
Long term UV stabilization - ASTM 2565 (Cycle 1): Greater than UV-16

General Information	
Additive	UV stabilizer
Features	High ESCR (Stress Cracking Resistance) hexene comonomer Impact resistance, good Good UV resistance Good liquidity
Uses	Agricultural application Water tank
Agency Ratings	ASTM D 2565 ASTM D 4976-PE233 FDA 21 CFR 177.1520(c) 3.2a 2 NSF 61
Forms	Powder
Processing Method	rotomolding

Physical	Nominal Value	Unit	Test Method
Density	0.943	g/cm³	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, molded, F50	250	hr	ASTM D1693A
100% Igepal, molded, F50	700	hr	ASTM D1693A
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% positive cut: mm, rotational molding	720	MPa	ASTM D790
Tangent: mm, rotational molding	860	MPa	ASTM D790
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, 3.17mm, rotational molding	64.0	°C	ASTM D648
1.8 MPa, unannealed, 3.17mm, rotational molding	44.0	°C	ASTM D648
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 4, 51mm/min		
2.	Type 4, 51mm/min		
3.	13 mm/min		
4.	速率 A (50°C/h), 压 力1 (10N)		

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