Marlex® HMN TR-938

中密度聚乙烯

Chevron Phillips Chemical Company LLC

Technical Data

Product Description

This medium density polyethylene resin is an ethylene-hexene copolymer tailored for rotational molding applications that require:

- Wide process window
- Excellent impact strength
- Good flow
- Excellent ESCR

This resin is available in two physical forms:

- Pellet form - HMN TR-938
- 35 US mesh powder - HMN TR-938G

Typical applications for HMN TR-938 and HMN TR-938G include:

- Industrial waste containers and tanks
- Marine equipment
- Industrial tanks

This resin meets these specifications:

- ASTM D4976 - PE 223
- FDA 21 CFR 177.1520(c) 3.2a, - Use conditions B through H per 21 CFR 176.170(c) Table 2 for 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. When contacting fatty foods of Types III, IV-A, V, VII-A, and IX described in Table 1, the finished articles are to have a volume of at least 18.9 liters (5 gallons).
- UL94HB yellow card per UL file E349283
- UL746C (f1) yellow card per UL file E349283
- FMVSS.302 burn test
- AS/NZS 4020:2005 (contact with drinking water)
- NSF / ANSI Standard 61 for potable water (CLD 23)
- AS/NZS 4766 (polyethylene water and chemical tanks) 4
- Long term UV stabilization - ASTM 2565 (Cycle 1): Greater than UV-16

General

Additive	• 紫外线稳定剂		
Features	• UV Stabilized • 高 ESCR（抗应力开裂） • 高抗撞击性	• 共聚物 • 己烯共聚单体 • 良好的流动性	• 食品接触的合规性 • 中等密度
Uses	• 船舶应用 • 废物容器	• 工业容器 • 水箱	
Agency Ratings	• AS/NZS 4766 • ASTM D2565 • ASTM D4976-PE223	• FDA 21 CFR 176.170(c), Table 1 • FDA 21 CFR 176.170(c), 表 2 [3] • FDA 21 CFR 177.1520(c) 3.2a	• NSF 61
Automotive Specifications	• FMVSS 302		
UL File Number	• E349283		
Forms	• 粒子		
Processing Method	• 滚塑成型		

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Physical	额定值 单位制	测试方法
Density	0.939 g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	3.0 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)		ASTM D1693A
10% Igepal, F50	200 hr	
100% Igepal, F50	> 1000 hr	
Outdoor Suitability	f1	UL 746C
Mechanical	**额定值 单位制**	**测试方法**
Tensile Strength [5] (屈服, 滚塑成形)	17.0 MPa	ASTM D638
Tensile Elongation [5] (断裂, 滚塑成形)	700 %	ASTM D638
Flexural Modulus [6]		ASTM D790
1% 正割 : 滚塑成形, 16.0 mm Span	660 MPa	
正切 : 滚塑成形, 16.0 mm Span	820 MPa	
Impact	**额定值 单位制**	
ARM Impact - Rotational Molded		
-40°C, 3.20 mm	95.0 J	
-40°C, 6.35 mm	237 J	
Hardness	**额定值 单位制**	**测试方法**
Durometer Hardness (邵氏 D)	60	ASTM D2240
Thermal	**额定值 单位制**	**测试方法**
Deflection Temperature Under Load		ASTM D648A
0.45 MPa, 未退火, 滚塑成形	62.0 °C	
1.8 MPa, 未退火, 滚塑成形	42.0 °C	
Brittleness Temperature	-75.0 °C	ASTM D746A
Vicat Softening Temperature	117 °C	ASTM D1525 [7]
Peak Melting Temperature	128 °C	ASTM D3418
Peak Crystallization Temperature (DSC)	113 °C	ASTM D3418
Flammability	**额定值 单位制**	**测试方法**
Flame Rating	HB	UL 94