

# Marlex® HMN 5445

High Density Polyethylene  
Saudi Polymers Company

Message:

This hexene copolymer is tailored for injection moulding applications that require:

- Good flow
- Good impact strength
- Good stiffness
- Durable and recyclable for sustainability

Typical injection moulded applications for HMN 5445 include items such as:

- Pails (9-20 liter)
- Automotive applications
- Toys
- Small containers for industrial compounds
- Houseware

General Information			
Features	Rigid, good  Copolymer  hexene comonomer  Impact resistance, good  Recyclable materials  Good liquidity  Durability  Compliance of Food Exposure		
Uses	Industrial container  Household goods  Application in Automobile Field  Barrel  Toys		
Agency Ratings	ASTM D 4976-PE232  FDA 21 CFR 177.1520(c) 3.2a  Europe No 10/2011		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	0.954	g/cm <sup>3</sup>	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	4.5	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (100% Igepal, Compression Molded, F50)	< 20.0	hr	ASTM D1693B

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, Compression Molded)	63		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>1</sup> (Yield, Compression Molded)	29.0	MPa	ASTM D638
Tensile Elongation <sup>2</sup> (Break, Compression Molded)	990	%	ASTM D638
Flexural Modulus			ASTM D790
1% secant: Molding	1300	MPa	ASTM D790
Tangent: Molding	1480	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, Compression Molded)	42	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648A
0.45 MPa, unannealed, molded	76.0	°C	ASTM D648A
1.8 MPa, unannealed, molded	49.0	°C	ASTM D648A
Brittleness Temperature <sup>3</sup>	< -75.0	°C	ASTM D746A
Vicat Softening Temperature	125	°C	ASTM D1525 <sup>4</sup>

#### Additional Information

The physical properties were determined on compression moulded specimens that were prepared in accordance with Procedure C of ASTM D4703, Annex A1.

#### NOTE

1. Type 4, 51mm/min
2. Type 4, 51mm/min
3. Type I specimen
4. 速率 A (50°C/h), 压力1 (10N)

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