

# Marlex® HMN 55180

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 55180 include items such as:
  - Pails (3-9 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	0.958	g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	18	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)	140	%	ASTM D638
Flexural Modulus			ASTM D790
1% secant: Molding	1290	MPa	ASTM D790
Tangent: Molding	1350	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, Compression Molded)	27	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648A
0.45 MPa, unannealed, molded	75.0	°C	ASTM D648A
1.8 MPa, unannealed, molded	50.0	°C	ASTM D648A
Brittleness Temperature <sup>3</sup>	< -75.0	°C	ASTM D746A
Vicat Softening Temperature	124	°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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