Technical Information

ENGAGE™ HM 7280
Polyolefin Elastomer

Overview

- High elasticity with good elastic recovery
- High melt strength
- Good impact strength
- Good flow characteristics

ENGAGE™ HM 7280 Polyolefin Elastomer Resin is produced via gas phase polymerization from Dow. This is an ethylene-butene copolymer exhibiting high flexibility and elasticity. It can be utilized in monolayer and coextruded films and in blends with other polyolefins to enhance melt strength and toughness of the structure.

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.884	g/cm³	0.884	g/cm³	ASTM D792
Melt Index (190°C/2.16 kg)	< 0.50	g/10 min	< 0.50	g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 302°F (150°C))	42	MU	42	MU	ASTM D1646
Total Crystallinity - %	24.7		24.7		Dow Method
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus - 100% Secant [1] (Compression Molded)	653	psi	4.50	MPa	ASTM D638
Tensile Strength [1] (Break, Compression Molded)	740	psi	5.10	MPa	ASTM D638
Tensile Elongation [1]					ASTM D638
Break, Compression Molded	310	%	310	%	
Flexural Modulus					ASTM D790
1% Secant : Compression Molded	4090	psi	28.2	MPa	
2% Secant : Compression Molded	3670	psi	25.3	MPa	
Elastomers	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Strength [2, 3]					ASTM D412
Break, 0.0394 in (1.00 mm)	3150	psi	21.7	MPa	
Tensile Elongation [2, 3]					ASTM D412
Break, 0.0394 in (1.00 mm)	640	%	640	%	
Tear Strength [2]					ASTM D624
-- [4]	268	lbf/in	46.9	kN/m	
0.0394 in (1.00 mm) [3]	314	lbf/in	55.0	kN/m	
Hardness	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Durometer Hardness					ASTM D2240
0.0394 in (1.00 mm), Extruded [3]	81		81		
Shore A, Compression Molded	84		84		
Shore D, Compression Molded	29		29		
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Glass Transition Temperature	-45.4	°F	-43.0	°C	Dow Method
Vicat Softening Temperature	140	°F	60.0	°C	ASTM D1525
Melting Temperature (DSC) [5]	241	°F	116	°C	Dow Method

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

[1] 20 in/min (510 mm/min)

[2] Die C

[3] Extruded sheet at 40 mil (1.0 mm) thickness with no significant difference between machine and cross-directional properties.