

CERTENE™ HI-2053

Muehlstein - High Density Polyethylene

Wednesday, September 27, 2023

General Information

Product Description

HI-2053 is a certified prime grade Hexene copolymer designed for INJECTION MOLDING, general purpose applications. HI-2053 features easy processability, good impact strength and good toughness. HI-2053 applications include multi-cavity caps, closures and lids, food containers and toys. HI-2053 complies with FDA regulation 21CFR 177.1520(c) 3.2a.

General

Material Status	• Commercial: Active		
Availability	• Latin America	• North America	
Features	• Copolymer • Food Contact Acceptable • General Purpose	• Good Impact Resistance • Good Processability • Good Toughness	• Hexene Comonomer
Uses	• Caps • Closures	• Food Containers • General Purpose	• Lids • Toys
Agency Ratings	• FDA 21 CFR 177.1520(c) 3.2a		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density	0.953	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	20	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR) 50°C, 100% Igepal, Compression Molded, F50	< 10.0	hr	ASTM D1693B
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ² (Yield, Compression Molded)	26.4	MPa	ASTM D638
Tensile Elongation ² (Break, Compression Molded)	280	%	ASTM D638
Flexural Modulus - 1% Secant (Compression Molded)	1170	MPa	ASTM D790B
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 0.45 MPa, Unannealed	73.3	°C	ASTM D648
Brittleness Temperature	< -75.0	°C	ASTM D746
Vicat Softening Temperature	121	°C	ASTM D1525

Additional Information

Test specimens from compression molded plaque according to ASTM D4976.

Notes

¹ Typical properties: these are not to be construed as specifications.

² 50 mm/min