

CERTENE™ HI-752

Muehlstein - High Density Polyethylene

Tuesday, January 23, 2024

General Information

Product Description

HI-752 is a certified prime copolymer designed for INJECTION MOLDING applications requiring good balance of mechanical properties. HI-752 features easy processability, good stiffness, good impact strength, high warpage resistance and excellent dimensional stability. HI-752 is especially suitable for pails, waste bins, bottle and fish crates, tote bins, fruit and vegetable trays, and handling materials where resistance to low temperature impact and toughness is required. HI-752 is not UV stabilized. Recommended processing temperature is 210 to 250°C. with mold @ 20 to 40°C.. HI-752 complies with FDA regulation 21CFR 177.1520 (c) 3.1 (a) + 3.2 (a) and with most international regulations concerning the use of Polyethylene in contact with food articles.

General

Material Status	• Commercial: Active
Availability	• Latin America • North America
Features	• Food Contact Acceptable • Good Processability • High Density • Good Dimensional Stability • Good Stiffness • Low Temperature Impact Resistance • Good Impact Resistance • Good Toughness • Warp Resistant
Uses	• Bottles • Pails • Crates • Support Trays
Agency Ratings	• FDA 21 CFR 177.1520(c) 3.1a • FDA 21 CFR 177.1520(c) 3.2a
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density	0.952	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	7.0	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR) 50°C, 100% Igepal, Compression Molded, F50	10.0	hr	ASTM D1693
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ² (Yield, Compression Molded)	27.6	MPa	ASTM D638
Tensile Elongation ² (Break, Compression Molded)	1000	%	ASTM D638
Flexural Modulus - 1% Secant ³ (Compression Molded)	1100	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Tensile Impact Strength (Compression Molded)	56.7	kJ/m ²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 0.45 MPa, Unannealed	75.0	°C	ASTM D648
Brittleness Temperature	-90.0	°C	ASTM D746
Vicat Softening Temperature	129	°C	ASTM D1525

Additional Information

This Specimen was compression molded and was tested according to ASTM D1928 Procedure C.

Processing Information

Injection	Nominal Value	Unit
Processing (Melt) Temp	210 to 250	°C
Mold Temperature	20 to 40	°C

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Notes

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

² 50 mm/min

³ 1.3 mm/min

