Muehlstein

CERTENE™ HI-752

Muehlstein - High Density Polyethylene

Tuesday, November 19, 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 Dimensional Stability • Good Impact Resistance	• Good Processability • Good Stiffness • Good Toughness	• High Density • Low Temperature Impact Resistance • Warp Resistant
Uses	• Bottles • Crates	• Pails • 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 Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	0.952	g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	7.0	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693
50°C, 100% Igepal, Compression Molded, F50	10.0	hr	
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/m²	ASTM D1822
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	75.0	°C	
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