

CERTENE™ HI-4052

Channel Prime Alliance - High Density Polyethylene

Sunday, November 17, 2019

General Information

Product Description

HI-4052 is a certified prime copolymer specially designed for molding thin wall applications requiring good balance of properties. HI-4052 features high flow, fast cycling, easy processability, good impact strength, high gloss surfaces, good dimensional stability and good stiffness. HI-4052 applications include multicavity thin-walled containers, frozen food containers, deep drawn housewares, over-caps, and bottle base cups. HI-4052 recommended processing temperature is 210 to 230°C. with mold @ 20 to 40°C.

General

Material Status	• Commercial: Active		
Availability	• North America		
Features	• Copolymer • Fast Molding Cycle • Good Dimensional Stability • Good Impact Resistance	• Good Processability • Good Stiffness • Good Surface Finish • High Density	• High Flow • High Gloss
Uses	• Bottles • Caps	• Cups • Food Containers	• Household Goods • Thin-walled Containers
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	0.952	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	40	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR) 50°C, 100% Igepal, Compression Molded, F50	0.900	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)	45	%	ASTM D638
Flexural Modulus - 1% Secant ³ (Compression Molded)	1140	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Tensile Impact Strength (Compression Molded)	31.5	kJ/m ²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 0.45 MPa, Unannealed	73.0	°C	ASTM D648
Brittleness Temperature	-70.0	°C	ASTM D746
Vicat Softening Temperature	123	°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 230	°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