

CERTENE™ HI-3052

High Density Polyethylene

Muehlstein

Message:

HI-3052 is a certified prime grade Hexene copolymer designed for INJECTION MOLDING General Purpose thin-wall applications requiring good balance of properties. HI-3052 features high flow, fast cycling, easy processability, good impact strength and dimensional stability. HI-3052 applications include multicavity thin-walled food containers, frozen food containers, seedling trays, aerosol over-caps and closures. HI-3052 recommended processing temperature is 210 to 230°C. with mold @ 20 to 40°C. HI-3052 complies with FDA regulation 21CFR 177.1520(c) 3.1a + 3.2a and with most international regulations concerning the use of Polyethylene in contact with food articles.

General Information			
Features	Good dimensional stability hexene comonomer Impact resistance, good Workability, good Fast molding cycle High liquidity Compliance of Food Exposure		
Uses	Thin wall parts Thin wall container Shield Food container Shell Bracket tray		
Agency Ratings	FDA 21 CFR 177.1520(c) 3.1a & 3.2a, B through H		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	0.952	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	30	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance ¹ (50°C, 1.75 mm, 100% Igepal, Compression Molded, F50)	< 10.0	hr	ASTM D1693B
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ² (Yield, Compression Molded)	23.4	MPa	ASTM D638
Tensile Elongation ³ (Break, Compression Molded)	200	%	ASTM D638
Flexural Modulus - 1% Secant ⁴ (Compression Molded)	1000	MPa	ASTM D790

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed)	73.0	°C	ASTM D648
Brittleness Temperature	< -50.0	°C	ASTM D746
Vicat Softening Temperature	120	°C	ASTM D1525

Additional Information

Test specimens from compression molded plaque according to ASTM D 1928 Procedure C.

Injection	Nominal Value	Unit
Processing (Melt) Temp	210 - 230	°C
Mold Temperature	20.0 - 40.0	°C

NOTE

- | | |
|----|--------------------|
| 1. | Notched Bent Strip |
| 2. | 50 mm/min |
| 3. | 50 mm/min |
| 4. | 1.3 mm/min |

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

