

# CERTENE™ HI-863

High Density Polyethylene

Muehlstein

## Message:

HI-863 is a certified prime grade designed for INJECTION MOLDING of large sized industrial applications requiring high Stiffness, good Toughness and good Impact strength. HI-863 features easy processability, excellent dimensional stability, and high Warpage resistance. HI-863 suggested applications include bottle crates, fish crates, fruit trays, vegetable trays, cases, tote bins, and structural foam. HI-863 recommended processing temperature is 220 to 250°C. with mold @ 20 to 40°C.. HI-863 complies with FDA regulation 21CFR 177.1520 (c) 3.2 (a) and with most international regulations concerning the use of Polyethylene in contact with food articles.

General Information			
Features	Good dimensional stability Rigidity, high Bending resistance Impact resistance, good Workability, good Good toughness Compliance of Food Exposure		
Uses	Structural Foam Tools/Parts Box Bracket tray Loading box		
Agency Ratings	FDA 21 CFR 177.1520(c) 3.2a		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	0.963	g/cm <sup>3</sup>	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	8.0	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance <sup>1</sup> (50°C, 1.75 mm, 100% Igepal, Compression Molded, F50)	3.00	hr	ASTM D1693B
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>2</sup> (Yield, Compression Molded)	32.0	MPa	ASTM D638
Tensile Elongation <sup>3</sup> (Break, Compression Molded)	600	%	ASTM D638
Flexural Modulus - 1% Secant <sup>4</sup> (Compression Molded)	1550	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, Compression Molded)	54	J/m	ASTM D256

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed)	78.0	°C	ASTM D648
Brittleness Temperature	< -75.0	°C	ASTM D746
Vicat Softening Temperature	125	°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	220 - 250	°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

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