

# CERTENE™ HI-864U

Muehlstein - High Density Polyethylene

Friday, November 4, 2022

## General Information

### Product Description

HI-864U is a certified prime grade UV STABILIZED resin designed for INJECTION MOLDING of large sized industrial applications requiring superior Toughness and high Stiffness. HI-864U features very narrow molecular weight distribution, easy processability, good Impact strength, very high Rigidity, excellent dimensional stability, and high Warpage resistance. HI-864U suggested applications include bottle and fish crates, fruit and vegetable trays, industrial pails, sport articles, cases, tote bins, and structural foam. HI-864U processing temperature is 220° to 250°C with mold at 20° to 40°C.. HI-864U 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
Additive	• UV Stabilizer
Features	• Food Contact Acceptable • Good Toughness • Good Dimensional Stability • High Rigidity • UV Resistant • Good Impact Resistance • High Stiffness • Warp Resistant • Good Processability • Narrow Molecular Weight Distribution
Uses	• Bottles • Industrial Applications • Crates • Pails • Structural Foam • Food Service Applications • Sporting Goods
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<sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.964	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	8.0	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR) <sup>2</sup> 50°C, 1.75 mm, 100% Igepal, F50	3.00	hr	ASTM D1693
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>3</sup> (Yield)	33.0	MPa	ASTM D638
Tensile Strength <sup>3</sup> (Break)	15.0	MPa	ASTM D638
Tensile Elongation <sup>3</sup> (Yield)	7.0	%	ASTM D638
Tensile Elongation <sup>3</sup> (Break)	100	%	ASTM D638
Flexural Modulus - 1% Secant <sup>4</sup>	1700	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	87	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 0.45 MPa, Unannealed	78.0	°C	ASTM D648
Vicat Softening Temperature	131	°C	ASTM D1525

### Additional Information

Test made on compression molded plaque according to ASTM D 1928 Procedure C.

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### Processing Information

Injection	Nominal Value	Unit
Processing (Melt) Temp	220 to 250	°C
Mold Temperature	20 to 40	°C

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Notched Bent Strip

<sup>3</sup> 50 mm/min

<sup>4</sup> 1.3 mm/min

