

CERTENE™ LLHR-538U

Medium Density Polyethylene
Muehlstein

Message:

LLHR-538U is a certified prime grade UV Stabilized Ethylene-Hexene Copolymer designed for high performance outdoor exposure Rotomolded applications. LLHR-538U is melt compounded for uniform dispersion of additives and UV stabilizer, supplied in pellet form of natural color. LLHR-538U features very good moldability, outstanding long-term outdoor exposure, and superior combination of ESCR, low temperature impact strength, toughness and stiffness. LLHR-538U applications include free-standing potable water tanks, small storage tanks, waste bins, playground equipment and toys. Version LLHR-538UP is available in form of 35 mesh powder ground from pellets. LLHR-538U complies with FDA regulation 21CFR 177.1520 (c) 3.1(a) + 3.2 (a) and most international regulations concerning the use of Polyethylene in contact with food articles.

General Information			
Additive	UV Stabilizer		
Features	Copolymer		
	Food Contact Acceptable		
	Good Impact Resistance		
	Good Moldability		
	Good Stiffness		
	Good Toughness		
	Good UV Resistance		
	High ESCR (Stress Crack Resist.)		
	Low Temperature Impact Resistance		
Uses	Tanks		
	Toys		
Agency Ratings	FDA 21 CFR 177.1520(c) 3.1a		
	FDA 21 CFR 177.1520(c) 3.2a		
Appearance	Natural Color		
Forms	Pellets		
Processing Method	Rotational Molding		
Physical	Nominal Value	Unit	Test Method
Density	0.938	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	5.0	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance ¹ (50°C, 1.75 mm, 100% Igepal, Compression Molded, F50)	> 1000	hr	ASTM D1693
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ² (Yield, Compression Molded)	17.0	MPa	ASTM D638

Tensile Elongation ³ (Break, Compression Molded)	16	%	ASTM D638
Flexural Modulus - 1% Secant ⁴ (Compression Molded)	730	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Low Temperature Impact (-40°C)	77.0	J	Internal Method
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed, Compression Molded)	60.0	°C	ASTM D648
Vicat Softening Temperature	118	°C	ASTM D1525

NOTE			
1.	Notched bent strip		
2.	50 mm/min		
3.	50 mm/min		
4.	1.3 mm/min		

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