

SURPASS® RMs539-U(UG)

Linear Low Density Polyethylene

NOVA Chemicals

Message:

SURPASS® RMs539-U(UG) is a Linear Low Density Polyethylene material. It is available in North America for compression molding or rotational molding.

Important attributes of SURPASS® RMs539-U(UG) are:

Flame Rated

Antioxidant

Copolymer

Fast Molding Cycle

Food Contact Acceptable

Typical applications include:

Food Contact Applications

Plumbing/Piping/Potable Water

Containers

Marine Applications

Sporting Goods

General Information	
UL YellowCard	E146584-516907
Additive	Antioxidant UV Stabilizer
Features	Antioxidant Copolymer Fast Molding Cycle Food Contact Acceptable Good Mold Release Good Processability Good Stiffness Low Density Low Temperature Impact Resistance Low Viscosity Octene Comonomer Pleasing Surface Appearance
Uses	Containers Marine Applications Septic Tanks Sporting Goods
Agency Ratings	FDA 21 CFR 176.170(c), Table 2, Cond. B FDA 21 CFR 176.170(c), Table 2, Cond. C FDA 21 CFR 176.170(c), Table 2, Cond. D

FDA 21 CFR 176.170(c), Table 2, Cond. E

FDA 21 CFR 176.170(c), Table 2, Cond. F

FDA 21 CFR 176.170(c), Table 2, Cond. G

FDA 21 CFR 176.170(c), Table 2, Cond. H

FDA 21 CFR 177.1520(c) 3.2a

NSF 24

NSF 51

NSF 61

Forms	Pellets
Processing Method	Compression Molding Rotational Molding

Physical	Nominal Value	Unit	Test Method
Density	0.939	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	5.2	g/10 min	ASTM D1238

Environmental Stress-Cracking Resistance			
50°C, 100% Igepal, Compression Molded, F50	> 1000	hr	ASTM D1693A
50°C, 100% Igepal, Compression Molded, F50	> 1000	hr	ASTM D1693B

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹ (Yield, 1.90 mm, Compression Molded)	20.0	MPa	ASTM D638
Tensile Elongation ² (Yield, 1.90 mm, Compression Molded)	13	%	ASTM D638
Flexural Modulus - 1% Secant (Compression Molded)	780	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Low Temperature Impact - Rotational Molded			ARM
-40°C, 3.18 mm	54.0	J	
-40°C, 6.35 mm	230	J	

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, Compression Molded	60.0	°C	
1.8 MPa, Unannealed, Compression Molded	42.0	°C	
Melting Temperature	125	°C	DSC

Flammability	Nominal Value	Test Method
Flame Rating	HB	UL 94

NOTE	
1.	Type IV, 51 mm/min

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