



Technical Data Sheet

Clearflex® RM50

Linear Medium Density Polyethylene

DESCRIPTION

Clearflex® RM50 is a linear medium density polyethylene resin (LMDPE), additivated with antioxidants and UV stabilizers, suitable for rotomoulding application. Items produced by Clearflex® RM50 have a good balance between mechanical properties and ESCR resistance.

APPLICATIONS

Due to its combination of mechanical properties, ESCR resistance and fluidity, Clearflex® RM50 is suggested for the production of medium capacity containers and hardly shaped items.

PROPERTIES

TYPICAL	Properties	Test Method	Typical Value
	Resin properties		
	Melt Flow Index _{190°C/2,16 kg} (g/10')	ASTM D 1238	4,2
	Density (g/cm ³)	ASTM D 1505	0,936
	Melting Point (°C)	PE	126
	Brittleness Point (°C)	ASTM D 746	< -70
	Vicat Softening Temperature _{1kg} (°C)	ASTM D 1525	113
	Mechanical properties¹		
	Tensile Strength at Yield (MPa)	ASTM D 638	18,5
	Tensile Strength at Break (MPa)	ASTM D 638	21
	Elongation at Break (%)	ASTM D 638	900
	Flexural Modulus (MPa)	ASTM D 790	690
	Izod Impact Strength at -30°C (J/m)	ASTM D 256	60
	Hardness Shore D	ASTM D 2240	58
	Environmental Stress Cracking Resistance (h)	ASTM D 1693 (B)	> 350

¹ Values are referred to an injection moulded plaque. Actual properties are typical and may vary depending upon operating conditions and additive package.

PROCESSING CONDITIONS

Clearflex® RM50 can be processed by rotomoulding technology using all machinery types. This material, when properly converted, allows obtaining finished items having good surface.

Suggested temperature range to obtain such results is 230 – 280 °C, depending on the residence time in the mould.

STORAGE AND HANDLING

Clearflex® RM50 is supplied in pellet form. This material may readily be conveyed and bulk-fed through equipment designed for conventional pelletised polyethylene resin, provided the equipment is designed to prevent accumulation of the fines and dust particles that are contained in all polyethylene resins. These fines and dust particles can, under certain conditions, pose an explosion hazard. We recommend that the conveying system used be equipped with filters of adequate size, operated and maintained in such a manner to ensure that no leaks develop and earthed adequately. We further recommend that good housekeeping be practised throughout your facility.

Before using this product, read and understand the current POLIMERI EUROPA Safety Data Sheet for this product.

AVAILABILITY

Contact the POLIMERI EUROPA sales office nearest to you regarding availability and your specific application requirements.

FOOD CONTACT STATUS

Clearflex® RM50 complies with the rules and regulations of the European Union, as well as other countries, regarding the use of plastic materials in food contact applications. Certificates of compliance are available upon request.

TECHNICAL SERVICE

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Technical Data Sheet

Clearflex® RL 50

Linear Medium Density Polyethylene

DESCRIPTION

Clearflex® RL 50 is a linear medium density polyethylene resin (LMDPE), additivated with antioxidants and UV stabilizers, suitable for rotomoulding application. Items manufactured with Clearflex® RL 50 show good mechanical properties and high environmental stress crack resistance (ESCR).

APPLICATIONS

Due to its good mechanical properties and high ESCR, Clearflex® RL 50 is recommended for the production of high capacity containers.

PROPERTIES

TYPICAL	Properties	Test Method	Typical Value
	Resin properties		
	Melt Flow Index _{190°C/2,16 kg} (g/10')	ASTM D 1238	3,5
	Density (g/cm ³)	ASTM D 1505	0,941
	Melting Point (°C)	PE	128
	Brittleness Point (°C)	ASTM D 746	< -70
	Vicat Softening Temperature _{1kg} (°C)	ASTM D 1525	118
	Mechanical properties¹		
	Tensile Strength at Yield (MPa)	ASTM D 638	19
	Tensile Strength at Break (MPa)	ASTM D 638	20
	Elongation at Break (%)	ASTM D 638	> 700
	Flexural Modulus (MPa)	ASTM D 790	730
	Izod Impact Strength at -20°C (J/m)	ASTM D256	70
	Hardness Shore D	ASTM D 2240	55
	Environmental Stress Cracking Resistance (h)	ASTM D 1693 (B)	> 500

¹ Values are referred to an injection moulded plaque. Actual properties are typical and may vary depending upon operating conditions and additive package.

PROCESSING CONDITIONS

Clearflex® RL 50 can be processed by rotomoulding technology using all machinery types. This material, when properly converted, allows obtaining finished items having good surface.

Suggested temperature range to obtain such results is from 230° C to 280 °C, depending on the residence time in the mould.

STORAGE AND HANDLING

Clearflex® RL 50 is supplied in pellet form. This material may readily be conveyed and bulk-fed through equipment designed for conventional pelletised polyethylene resin, provided the equipment is designed to prevent accumulation of the fines and dust particles that are contained in all polyethylene resins. These fines and dust particles can, under certain conditions, pose an explosion hazard. We recommend that the conveying system used be equipped with filters of adequate size, operated and maintained in such a manner to ensure that no leaks develop and earthed adequately. We further recommend that good housekeeping be practised throughout your facility.

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