



Technical Data Sheet

Flexirene® MR50

Linear Medium Density Polyethylene

DESCRIPTION

Flexirene® MR50 is a linear medium density polyethylene (LMDPE) additivated with antioxidants, suitable for injection moulding application.
Parts made by Flexirene® MR50 are characterised by an optimum rigidity.

APPLICATIONS

Flexirene® MR50 is recommended for the production of thin-walled containers requiring high mechanical properties, lids, closures, houseware and shock absorbers.

PROPERTIES

TYPICAL	Properties	Test Method	Typical value
Resin Properties			
	Melt Flow Index _{190 °C / 2.16 kg} (g/10')	ASTM D1238	22
	Density (g/cm ³)	ASTM D1505	0.939
	Melting point (°C)	PE	128
	Brittleness point (°C)	ASTM D746	<-70
	Vicat softening point _{1kg} (°C)	ASTM D1525	112
Mechanical properties¹			
	Tensile strength at yield (MPa)	ASTM D638	15
	Tensile strength at break (MPa)	ASTM D638	15
	Elongation at break (%)	ASTM D638	>500
	Flexural modulus (MPa)	ASTM D790	500
	Hardness (Shore D)	ASTM D2240	56

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

Processing conditions are depending on several parameters: the shape of the part to be manufactured, the localisation of the injection point, the injection moulding machine and the cooling of the mould

Typical processing conditions:

Temperature profile of the barrel (°C) 170 - 230

Temperature of the mould (°C) 10 - 40

STORAGE AND HANDLING

Flexirene® MR50 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

Flexirene® MR50 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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