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Technical data sheet

FLEXIRENE ®

LLDPE

MR 56 A

Linear low density polyethylene

Flexirene MR 56 A is a linear low density polyethylene (LLDPE) with antioxidants, suitable for injection moulding application.
Products made by Flexirene MR 56 A are characterised by optimum rigidity. Flexirene MR 56 A is highly pure and it is suitable for all applications where good organoleptic properties are required.

Main Application

Flexirene MR 56 A is recommended for the production of thin walled containers requiring high mechanical properties, caps, closures and houseware.

Main Properties

Resin Properties	Value	Unit	Test Method
Melt Flow Rate (190 °C/2,16 kg)	22	g/10min	ISO 1133
Melt Flow Rate (190 °C/5 kg)	-	g/10min	ISO 1133
Melt Flow Rate (190 °C/21,6 kg)	-	g/10min	ISO 1133
Density	0,939	g/cm3	ISO 1183
Melting point	124	°C	Internal method
Brittleness temperature	< -70	°C	ASTM D 746
Vicat softening point (1 kg)	112	°C	ISO 306/A

Mechanical Properties *	Value	Unit	Test Method
Tensile stress at yield	15	MPa	ISO 527
Tensile stress at break	15	MPa	ISO 527
Tensile strain at yield	-	%	ISO 527
Elongation at break	> 450	%	ISO 527
Flexural modulus	500	MPa	ISO 178
Hardness Shore D	56	-	ISO 868 A
Falling Weight	-	J	ISO 6603-2
Izod impact strength, notched	-	J/m	ASTM D 256
Environmental Stress Cracking Resistance (ESCR)	-	h	ASTM D 1693 (B)

(*) Values are referred to injection moulded specimens. Actual properties are typical and may vary depending upon operating conditions.

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Processing notes

Flexirene MR 50 U is readily processable by conventional injection moulding equipment with excellent results.
Typical processing conditions: **

Temperature profile of the barrel	(°C)	170 - 230
Temperature of the mould	(°C)	10 - 40

(**) 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.

Storage and Handling

Flexirene MR 56 A 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 should be practised throughout your facility.
The product should be stored in dry conditions at temperatures below 50 °C and protected from sunlight.
Improper storage can initiate degradation which results in odour generation, colour changes and can have negative effects on the physical properties of the product.
Before using this product it is recommended to read and understand the relevant Safety Data Sheet.

Availability

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

Food Contact Status

Flexirene MR 56 A 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 Management Polyethylene

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IMPORTANT: please consult the relevant safety data sheet for more detailed information. The information and data presented herein are to the best of our knowledge true and accurate but no warranty or guarantee, expressed or implied, is made nor is any liability accepted with respect to the use of such information and data. Versalis is available to provide the guaranteed values for each product on demand.
DISCLAIMER: it is the sole responsibility of the end-user to determine the safety, the regulatory compliance as well as the technical suitability of the product for the intended application. The product is not intended for use in medical devices and pharmaceutical applications; Versalis declines all responsibility and cannot be held liable in case of use in the above mentioned applications.