versalis

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Technical data sheet

ERACLENE ®

MR 80 U

HDPE

High density polyethylene

Eraclene MR 80 U is a high density polyethylene resin (HDPE), with antioxidants.
The narrow distribution of molecular weights and high density make Eraclene MR 80 U the ideal polymer for injection moulding applications. The polymer produced has an excellent thermal stability during the transformation phase and a good balance between fluidity and mechanical characteristics. Eraclene MR 80 U shows a good balance between processability and mechanical properties.

Main Application

Eraclene MR 80 U is ideal in injection moulding for the production of small items obtained in fast cycles: thin-walled containers, household items and gaskets.

Main Properties

Resin Properties	Value	Unit	Test Method
Melt Flow Rate (190 °C/2,16 kg)	18	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	0,954	g/cm3	ISO 1183
Melting point	132	°C	Internal method
Brittleness temperature	< -60	°C	ASTM D 746
Vicat softening point (1 kg)	126	°C	ISO 306/A

Mechanical Properties *	Value	Unit	Test Method
Tensile stress at yield	27	MPa	ISO 527
Tensile stress at break	14	MPa	ISO 527
Tensile strain at yield	-	%	ISO 527
Elongation at break	200	%	ISO 527
Flexural modulus	1250	MPa	ISO 178
Hardness Shore D	65	-	ISO 868 A
Falling Weight	-	J	ISO 6603-2
Izod impact strength, notched	45	J/m	ASTM D 256
Environmental Stress Cracking Resistance (ESCR)	-	h	ASTM D 1693 (B)

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

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Processing notes

Eraclene MR 80 U is readily processable by conventional injection moulding equipment with excellent results.
Typical processing conditions: **

Temperature profile of the barrel	(°C)	190 - 260
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

Eraclene MR 80 U 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

Eraclene MR 80 U 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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