Technical Data Sheet

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CLEARFLEX®

RM 506 U

LLDPE

Linear low density polyethylene

Clearflex RM 506 U is a linear polyethylene resin, with antioxidants and UV stabilizers, suitable for rotomoulding applications.
During polymerization it has been modified with exene comonomer. Items manufactured with Clearflex RM 506 U show good mechanical properties, high impact resistance and outstanding environmental stress crack resistance (ESCR).

Main Application

Clearflex RM 506 Uis recommended for the production of industrial tanks, high capacity containers and hardly shaped items. Compared to the standard rotational moulding grades, Clearflex RM 506 U shows higher resistance to chemical agents such as detergents, oil and fuel.

Main Properties

Resin Properties	Value	Unit	Test Method
Melt Flow Rate (190 °C/2.16 kg)	3.5	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	0.934	g/cm3	ISO 1183
Melting point	126	°C	Internal method
Brittleness temperature	<- 70	°C	ASTM D 746
Vicat softening point (1 kg)	114	°C	ISO 306/A

Mechanical Properties *	Value	Unit	Test Method
Tensile stress at yield	16	MPa	ISO 527
Tensile stress at break	20	MPa	ISO 527
Tensile strain at yield	-	%	ISO 527
Elongation at break	> 550	%	ISO 527
Flexural modulus	450	MPa	ISO 178
Hardness Shore D	61	-	ISO 868 A
Falling Weight:	75 **	J	ISO 6603-2
Izod impact strength, notched	-	J/m	ASTM D 256
Environmental Stress Cracking Resistance (ESCR)	> 1000 *	h	ASTM D 1693(B)

(*) Values are referred to injection moulded specimens. Actual properties are typical and may vary depending upon operating conditions.
(**) Value is referred to rotomoulded specimens.
(***) 100% surface-active agent – Condition B.

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Manufacturer website: https://www.versalis.eni.com/

Processing notes

Clearflex RM 506 U 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 RM 506 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

Clearflex RM 506 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 Polietilene and Client Relationship

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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.

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