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Technical data sheet

ERACLENE ®

DB 506

HDPE

High density polyethylene

Eraclene DB 506 is a high density polyethylene resin (HDPE), hexene copolymer, obtained by gas phase technology process.
The main properties of Eraclene DB 506 are emphasized when it is used for production of drip irrigation pipe. The balanced molecular weight distribution, density and the low content of gels are successfully combined in order to provide excellent mechanical properties, sealability, melt strenght and drawability at high extrusion rate.

Main Application

Eraclene DB 506 can be easily used in blend with LLDPE and LDPE grades to modify the final properties of the drip irrigation pipe accordging to the specific needs. For outdoor application, it is strongly suggested to add anti UV. The combined usage of these additives together with carbon black can provide outstanding resistance to UV radiation.

Main Properties

Resin Properties	**Value**	**Unit**	**Test Method**
Melt Flow Rate (190 °C/2,16 kg)	0,23	g/10min	ISO 1133
Melt Flow Rate (190 °C/5 kg)	0.9	g/10min	ISO 1133
Melt Flow Rate (190 °C/21,6 kg)	21,5	g/10min	ISO 1133
Density	0,939	g/cm3	ISO 1183
Melting point	127	°C	Internal method
Brittleness temperature	< -60	°C	ASTM D 746
Vicat softening point (1 kg)	119	°C	ISO 306/A

Mechanical Properties *	**Value**	**Unit**	**Test Method**
Tensile stress at yield	18	MPa	ISO 527-3
Tensile stress at break	45	MPa	ISO 527-3
Tensile strain at yield	-	%	ISO 527-3
Elongation at break	> 800	%	ISO 527-3
Flexural modulus	690	MPa	ISO 178
Hardness Shore D	58	-	ISO 868 A
Falling Weight	-	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 compression moulded specimens. Actual properties are typical and may vary depending upon operating conditions.
(**) 100% surface-active agent – Condition B.

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Processing notes

Eraclene DB 506 is readily processable by conventional equipment. It is suggested to be used a mixing screw with a flat or slightly growing temperature profile from 190 °C up to 230 °C. The best balance of processing and properties of the drip irrigation pipe is obtained with a die gap between 1,5 mm and 2,5 mm.

Storage and Handling

Eraclene DB 506 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 DB 506 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.

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