Technical Data Sheet

ERACLENE®
FC 82 BA

HDPE
High density polyethylene bio attributed

SUSTAINABILITY

The product Eraclene FC 82 BA 'Bio attributed' is a highly sustainable HDPE produced using bionafta from renewable raw materials together with traditional raw materials. In order to attribute the sustainable feedstock component to the final product Versalis applies the Mass Balance approach, a recognized methodology that allows to trace the flow of materials along the value chain and to assign the sustainability characteristic of the raw material to the final product on a documentary basis. Eraclene FC 82 BA provides the same chemical composition and physical-mechanical performance of the traditional grade, in addition is accompanied by a sustainability declaration that certifies the share of bio attributed product. It is a high density polyethylene resin (HDPE), with antioxidants, suitable for blown film technology. The production of Eraclene FC 82 BA allows to contribute to the circular economy, since the bionafta used derives from renewable resources (e.g. vegetable oils). Eraclene FC 82 BA will be bio attributed for 95%. The exact amount of "bio attributed" product will be reported in the sustainability certificate issued upon the delivery of the product.

MAIN PROPERTIES

Resin Properties	Value	Unit	Test method
Melt Flow Rate (190 °C/2.16 kg)	0.3	g/10min	ISO 1133
Melt Flow Rate (190 °C/5 kg)	-	g/10min	ISO 1133
Melt Flow Rate (190 °C/21.6 kg)	23	g/10min	ISO 1133
Density	0.953	g/cm^3	ISO 1183
Melting Point	131	°C	Metodo interno
Brittleness temperature	<- 60	°C	ASTM D 746
Vicat softening point (1 kg)	127	°C	ISO 306/A

Film Properties *	Value	Unit	Test method
Tensile stress at yield MD	-	MPa	ISO 527-3
Tensile stress at yield TD	-	MPa	ISO 527-3
Tensile stress at break MD	50	MPa	ISO 527-3
Tensile stress at break TD	45	MPa	ISO 527-3
Elongation at break MD	500	%	ISO 527-3
Elongation at break TD	650	%	ISO 527-3
1% Secant modulus MD	650	MPa	ISO 527-3
1% Secant modulus TD	800	MPa	ISO 527-3
Elmendorf tear resistance MD	10	N/mm	ISO 6383-2
Elmendorf tear resistance TD	25	N/mm	ISO 6383-2
Impact resistance F50 (Dart Drop Test)	70	g	ISO 7765-1/A
Dynamic coefficient of friction (COF)	-	-	ISO 8295
Haze	-	%	ISO 14782
Gloss, 45°	-	%	ASTM D 2457
Recommended film thickness	10 ÷ 50	micron	-

(*) Film properties are typical of blown film extruded at 1:4.5 blow up ratio; 210°C melt temperature, die gap 1.1 mm and thickness 25 µm. Actual properties are typical and may vary depending upon operating conditions and additive package.

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ERACLENE® HDPE / High density polyethylene bio attributed **FC 82 BA**

MAIN APPLICATIONS

Eraclene FC 82 BA can be used for high strength grocery sacks, shopping bags, notion and millinery bags. The excellent balance between drawability and bubble stability makes Eraclene FC 82 BA perfect for manufacturing of high strength thin films (shopping bags, bags on the reel, lamination film). Its broad molecular weight distribution and density successfully combine excellent performance at high extrusion rates with high film strength.

PROCESSING NOTES

Eraclene FC 82 BA can be processed by using conventional blown film equipment. A mixing screw and a flat or slightly increasing temperature profile, from 190°C to 210°C, are recommended. The best balance between processability and mechanical properties is achieved by using a die gap between 1 mm and 1.3 mm.

STORAGE AND HANDLING

Eraclene FC 82 BA is supplied in pellet form. This material may readily be conveyed and bulk fed through equipment designed for conventional pelletized 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 practiced 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 odor generation, color 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 FC 82 BA 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.

January 2023

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