



# CLEARFLEX® RN 50 U BCA

LLDPE  
Linear low density polyethylene bio circular attributed



## SUSTAINABILITY

The product Clearflex RN 50 U BCA 'Bio Circular attributed' is a highly sustainable LLDPE produced using bio-nafta 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. Clearflex RN 50 U BCA 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 linear medium density polyethylene resin with antioxidants and UV, suitable for rotomoulding application. The production of Clearflex RN 50 U BCA allows to contribute to the circular economy, since the bio-nafta used derives from waste from industrial processing of organic substances (e.g. used cooking oils). Clearflex RN 50 U BCA will be bio circular attributed for 85%. The exact amount of 'bio circular 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)	6	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	0.936	g/cm <sup>3</sup>	ISO 1183
Melting Point	127	°C	Metodo interno
Brittleness temperature	<- 70	°C	ASTM D 746
Vicat softening point (1 kg)	113	°C	ISO 306/A
Mechanical Properties *	Value	Unit	Test method
Tensile stress at yield	15	MPa	ISO 527
Tensile stress at break	13	MPa	ISO 527
Tensile strain at yield	-	%	ISO 527
Elongation at break	>550	%	ISO 527
Flexural modulus	450	MPa	ISO 178
Hardness Shore D	56	-	ISO 868 A
Falling weight**	60	J	ISO 6603-2
Izod impact strength, notched	-	J/m	ASTM D 256
Environmental Stress Cracking Resistance (ESCR)***	>250	h	ASTM D 1693(B)





**CLEARFLEX® LLDPE** / Linear low density polyethylene bio circular attributed

**RN 50 U BCA**

## MAIN APPLICATIONS

Thanks to good balance between mechanical properties and processability, Clearflex RN 50 U BCA is recommended for the production of hardly shaped items, toys, vases and garden articles. Items manufactured with Clearflex RN 50 U BCA show good mechanical properties and excellent surface aspect.

## PROCESSING NOTES

Clearflex RN 50 U BCA 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 RN 50 U BCA 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

Clearflex RN 50 U BCA 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.

