

ORIGIN OF WASTE POLYMERS

We purchase post-consumer and post-industrial plastic waste, primarily HDPE and PP, sourced from manufacturing facilities, households, and sorting centers. Without proper recycling, this plastic would end up in landfills, rivers, or oceans, causing long-term harm to the environment. By collecting and recycling this waste, we help reduce pollution, conserve natural resources, and give plastic a new life — contributing to a more sustainable future.

RECYCLING STEPS

Rough Sorting; Fine Fractioning/Homogenisation; Metal Detection; Shredding; Washing; Separation; Compounding; Extrusion

SELECTED PROCESSING SUITABILITY

Most suitable: Injection moulding; 3D Printing; Extrusion (e.g.: sheets; fibres; films; pipes; tubes); Thermoforming; 3D Free form injection moulding. Possible: Blow moulding (e.g.: bottles); Roto moulding.

TECHNICAL DATA				
PHYSICAL PROPERTIES	METHODS	CONDITIONS	VALUES	UNITS / COMMENTS
Melt Flow Index	ISO 1133	230 °C ; 5 kg	0.4 - 0.8	[g/10min] SD ±0,24
Density	ISO 1133	Immersion	0,94 - 0,96	[g/cm3] SD ±0,002
Shape	Visual Inspection	Water cut	1,5	Extrusion Die [mm] / Uniform Pellets
Color	Visual Inspection	Daylight	Dark Gray	
Odor	Sensory Evaluation		Plastic	
Recycled Plastics Content			100	%
Polymers Composition		HDPE	100	%
Extrusion Filtration	Mesh Size		200	μ
Ash Content			< 1,83	[%] SD ±0,16
MECHANICAL PROPERTIES				
Tensile strength	ISO 527	50 mm/min	32	Mpa
E-modulus	ISO 178	5 mm/min	-	Mpa
Elongation at Break				
Charpy Impact Strength	ISO 179	5 Joule; Notched	5 - 6	KJ/m2
THERMAL PROPERTIES				
Melting Point			132 - 140	°C

Material handling: ReGranX HDPE granules need normally not be dried. However, condensation of atmospheric moisture inside the packing may occur due to fluctuating temperatures and high humidity upon storage. RTF BG recommends that the HDPE is pre-dried to remove possible condense moisture, which could be done with 2 hours drying at 80°C or according to our customers' normal pre-drying procedure for HDPE.

ReGranX HDPE carbon footprint: The carbon footprint of ReGranX HDPE is 94% lower than comparable virgin HDPE. Consequently, for every 1,000 kg ReGranX HDPE used, the climate is saved from 1,868 kg of CO2 equivalents. In addition, using 1,000 kg ReGranX HDPE means that 1,000 kg of hard-to-recycle PP fiber waste have been processed instead of ending up on landfills or in the environment.

For further information contact:

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RTF BG JSC

Laboratory Capabilities

Our Laboratory is equipped with state-of-the-art instruments for polymer analysis.

Mechanical properties: Tensile, impact & aging testing

Physical properties: MFI & density, CIELab Colour Analysis

Thermal Properties: DSC, oxidative decomposition analysis

Chemical Properties: FTIR, ash content, heavy metal detection by XRF analysis