PROVISIONAL DATA SHEET

r-HDPE (PRIME)

>95%

RECYCLED HIGH DENSITY POLYETHYLENE (r-HDPE)

UPRA recycles post-consumer plastic waste. We make impact in the most sustainable way and we want to be a frontrunner in the global challenge of making plastic packaging circular. Umincorp has developed a disruptive plastic recycling approach by using a unique technology called Magnetic Density Separation (MDS). Our technology enables us to recycle plastics at high recovery rates with a low carbon footprint. We make plastics circular.

PRODUCT DESCRIPTION

UPRA r-HDPE is a mix colour high-density polyethylene (HDPE) grade supplied in flakes form. This 100% post-consumer-based material originates from Dutch household packaging waste. It is characterized by a high molecular weight with good processing properties.

APPLICATION

UPRA r-HDPE is a general-purpose grade that can be used for bottles and containers in e.g. personal care, household and industrial liquids, and for extruded articles such as pipes, profiles, wire & cable jacketing can be used for sheet, fibre, strapping, packaging applications. This grade cannot be used for direct food applications.

TYPICAL PROPERTIES

Physical	Typical Value	Units	Test Method
Density	950	kg/m3	ISO 1183-1A
Melt flow rate (MFR) 190^{0}C/2,16kg	0,5	g/10 min	ISO 1133
HDPE content (DSC)	> 95	%	ISO 11357
Ash content 600^{0}C	< 1,5	%	ISO 3451-1A

Mechanical	Typical Value	Units	Test Method
Charpy Impact Strength (unnotched)	Non-break	kJ/m^2	ISO 179-1/1eU
Charpy Impact Strength (notched)	20	kJ/m2	ISO 179-1/1eA
Strength	25	MPa	ISO 527-2 type 1A, 50 mm/min
Tensile Modulus (23 °C)	920	MPa	ISO 527-2 type 1A, 1mm/min
Tensile strain at yield	10	%	ISO 527-2 type 1A, 50 mm/min
Tensile strain at break	80	%	ISO 527-2 type 1A, 50 mm/min
Flexural Modulus (23 °C)	970	MPa	ISO 178, 2mm/min

PROVISIONAL DATA SHEET

r-HDPE (A)

89,6 – 95%

RECYCLED HIGH DENSITY POLYETHYLENE (r-HDPE)

PRODUCT DESCRIPTION

UPRA r-HDPE is a mix colour high-density polyethylene (HDPE) grade supplied in flakes form. This 100% post-consumer-based material originates from Dutch household packaging waste. It is characterized by a high molecular weight with good processing properties.

TYPICAL PROPERTIES

Physical	Typical Value	Units	Test Method
Density	952	kg/m3	ISO 1183-1A
Melt flow rate (MFR) 190⁰C/2,16kg	0.44	g/10 min	ISO 1133
HDPE content (DSC)	89.6-95	%	ISO 11357
Ash content 600⁰C	1.12	%	ISO 3451-1A

Mechanical	Typical Value	Units	Test Method
Charpy Impact Strength (unnotched)	3.8	kJ/m²	ISO 179-1/1eU
Charpy Impact Strength (notched)	18	kJ/m2	ISO 179-1/1eA
Strength	23.9	MPa	ISO 527-2 type 1A, 50 mm/min
Tensile Modulus (23 °C)	894	MPa	ISO 527-2 type 1A, 1mm/min
Tensile strain at yield	10.1	%	ISO 527-2 type 1A, 50 mm/min
Tensile strain at break	102	%	ISO 527-2 type 1A, 50 mm/min

PROVISIONAL DATA SHEET

r-HDPE (B)

80 – 89,6%

RECYCLED HIGH DENSITY POLYETHYLENE (r-HDPE)

APPLICATION

UPRA r-HDPE is a general-purpose grade that can be used for bottles and containers in e.g. personal care, household and industrial liquids, and for extruded articles such as pipes, profiles, wire & cable jacketing can be used for sheet, fibre, strapping, packaging applications. This grade cannot be used for direct food applications.

TYPICAL PROPERTIES

Physical	Typical Value	Units	Test Method
Density	952	kg/m3	ISO 1183-1A
Melt flow rate (MFR) 190⁰C/2,16kg	0.89	g/10 min	ISO 1133
HDPE content (DSC)	80-89.6	%	ISO 11357
Ash content 600⁰C	1.56	%	ISO 3451-1A

Mechanical	Typical Value	Units	Test Method
Charpy Impact Strength (unnotched)	2.4	kJ/m²	ISO 179-1/1eU
Charpy Impact Strength (notched)	6.4	kJ/m2	ISO 179-1/1eA
Strength	23.4	MPa	ISO 527-2 type 1A, 50 mm/min
Tensile Modulus (23 °C)	892	MPa	ISO 527-2 type 1A, 1mm/min
Tensile strain at yield	9.8	%	ISO 527-2 type 1A, 50 mm/min
Tensile strain at break	78	%	ISO 527-2 type 1A, 50 mm/min

WE MAKE PLASTICS CIRCULAR