

PE-HD REGENERATE (POLYETHYLENE)

MATERIAL DATA SHEET

PROPERTIES	Test methods	Units	VALUES
Colour	-	-	Multi-coloured
Density	ISO 1183	kg/m ³	≥940
Average molecular weight (average molecular mass)		g/mol	Approx 3x10 ⁶ – 7x10 ⁶
Water absorption at 23°C until saturation	ISO 62	%	<0.01
Thermal Properties			
Melting point (DSC, 10 K/min)	ISO 3146	°C	135-138
Vicat softening point	ISO 306	°C	80
Thermal conductivity at 23°C	ISO 52612	W/(K.m)	Ca 0.4
Coefficient of linear thermal expansion:			
- average value between 23 and 80°C	ISO 11359	K ⁻¹	Ca 2 x 10 ⁻⁴
Allowable service temperature in air (max)	-	°C	80
Allowable service temperature in air (briefly)	-	°C	90
Allowable service temperature in air (min)	-	°C	-150
Mechanical Properties at 23°C			
Tensile stress at yield	ISO 527	MPa	≥13
Tensile modulus of elasticity	ISO 527	MPa	600
Elongation at break	ISO 527	%	≥ 100
Charpy impact strength – unnotched at 23°C	ISO 179	kJ/m ²	No break
Charpy impact strength – notched at 23°C	ISO 11542-2	kJ/m ²	≥50
Ball indentation hardness	ISO 2039-1	MPa	30-35
Shore-Hardness D,15s value	ISO 868	-	60-65
Friction coefficient	-	-	Ca 0.2
Abrasion (Sand –Slurry)	-	%	≤300
Electrical Properties at 23 °C			
Volume resistivity	IEC 60093	Ohm.m	> 10 ³
Surface resistivity	IEC 60093	Ohm	> 10 ⁴
Relative permittivity at 100 Hz	IEC 60250	-	-

Note: 1 g/cm³ = 1,000 kg/m³ ; 1 MPa = 1 N/mm² ; 1 kV/mm = 1 MV/m. NA: not applicable

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