

PE 1000 - EL

Material Information



PE 1000 - EL

Product full identity:

Polyethylene - Electrical Conductive Ultra High Molecular Weight

PE 1000-EL is a permanently anti-static, conductive material with high-impact strength and low moisture absorption. Ideal for hazards, high-impact applications, electrically sensitive systems, and linings, it delivers reliable performance and safety in demanding projects.

Properties

- Permanently antistatic and conductive
- Excellent wear resistance and sliding properties
- High impact strength
- Wide temperature range (+80 to -200°C)
- Low coefficient of friction
- Very low moisture absorption <0.1%
- Food contact approved

Applications

- High impact applications
- General machining
- Linings

Forms



Sheet

PE 1000 - EL

Technical Properties

Physical	Unit	Test Method	Result
Specific gravity	g/cm ³	DIN EN ISO 1183-1	0.93
Water absorption until saturation at 23°C	%	DIN EN ISO 62	<0.01
Maximum service temp. Upper temp limit – short term	°C	-	100
Maximum service temp. Upper temp limit – long term	°C	-	80
Lower temp limit	°C	-	-200
Mechanical	Unit	Test Method	Result
Tensile strength	MPa	DIN EN ISO 527-1/2	>20
Elongation at yield	%	DIN EN ISO 527-1/2	350
Tensile strength at break	MPa	-	-
Unnotched impact strength	kJ/m ²	DIN EN ISO 179-1/2	No break
Notch impact strength	kJ/m ²	DIN EN ISO 179-1/2	>150
Ball indentation / Rockwell hardness	MPa	DIN EN ISO 2039-1	38
Shore-D		DIN EN ISO 868	60 - 63
Flexural modulus of elasticity	MPa	-	-
Tensile modulus of elasticity	MPa	DIN EN ISO 527-1/2	700
Thermal	Unit	Test Method	Result
Vicat-softening point VST/B/50	°C	DIN EN ISO 306	80
Heat deflection temperature HDT/B	°C	-	-
Coefficient of linear thermal expansion 23 – 100°C	m/(m.K)	ISO 11359-2	20 x 10 ⁻⁵
Thermal conductivity at 23°C	W/mK	ISO 52612	> 0.40
Electrical	Unit	Test Method	Result
Volume resistivity	Ω x m	-	-
Surface resistivity	Ω	DIN EN 62631-3-1	<10 ⁵
Insulation resistivity	Ω . cm	DIN EN 62631-3-1	<10 ⁵
Dielectric constant at 1MHz		-	-
Dielectric loss factor at 1MHz		-	-
Dielectric strength	kV/mm	-	-
Comparative tracking index (CTI)		-	-
Additional Data	Unit	Test Method	Result
Bondability		-	-
Food compliance – FDA		FDA	Yes
Food compliance – EU		EU 10/2011	Yes
Antistatic		-	Yes
Flammability	Unit	Test Method	Result
Fire performance		UL 94	HB
Optical	Unit	Test Method	Result
N/A	N/A	N/A	N/A

All information provided in this Product Datasheet is for guide purposes only. The data has been taken from standard test results provided by our manufacturers.