

PE 500

Material Information



PE 500

Product full identity:

Polyethylene - High Molecular Weight

PE 500 combines high-impact strength, abrasion resistance, and chemical durability with a low friction surface and food contact compliance. Ideal for food and beverage processing, dairy production, leisure, and other high-impact applications, it delivers reliable, long-lasting performance.

Properties

- Food Contact approved
- Excellent impact strength
- Wide temperature range (+80 to -60°C)
- Low coefficient of friction
- Very low moisture absorption <0.1%

Applications

- Food processing
- Dairy production
- Beverage processing and filling
- Leisure
- All high impact applications

Forms



Sheet

PE 500

Technical Properties

Physical	Unit	Test Method	Result
Specific gravity	g/cm ³	DIN EN ISO 1183-1	0.95
Water absorption until saturation at 23°C	%	DIN EN ISO 62	<0.01
Maximum service temp. Upper temp limit – short term	°C	-	120
Maximum service temp. Upper temp limit – long term	°C	-	80
Lower temp limit	°C	-	-80
Mechanical	Unit	Test Method	Result
Tensile strength	MPa	DIN EN ISO 527-1	>20
Elongation at yield	%	DIN EN ISO 527-1	>650
Tensile strength at break	MPa	-	-
Unnotched impact strength	kJ/m ²	-	-
Notch impact strength	kJ/m ²	DIN EN ISO 179-1	>25
Ball indentation / Rockwell hardness	MPa	DIN EN ISO 2039-1	50
Shore-D		DIN EN ISO 868	60-63
Flexural modulus of elasticity	MPa	-	-
Tensile modulus of elasticity	MPa	DIN EN ISO 527-1	>1100
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 · 10 ⁻⁵
Thermal conductivity at 23°C	W/mK	DIN EN 12667	0.40
Electrical	Unit	Test Method	Result
Volume resistivity	Ω x m	-	-
Surface resistivity	Ω	DIN EN 62631-3-1	>10 ¹²
Insulation resistivity	Ω . cm	DIN EN 62631-3-1	>10 ¹²
Dielectric constant at 1MHz		-	-
Dielectric loss factor at 1MHz		-	-
Dielectric strength	kV/mm	IEC 60243-1	50
Comparative tracking index (CTI)		-	-
Additional Data	Unit	Test Method	Result
Bondability		-	-
Food compliance – FDA		FDA	Yes
Food compliance – EU		EU	Yes
Antistatic		-	-
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.