

PE 1000 - MD

Material Information



PE 1000 - MD

Product full identity:

Polyethylene - Metal Detectable Ultra High Molecular Weight

PE 1000 MD is designed for metal detection in food processing and packaging. With excellent impact strength, wear resistance, chemical resistance, and low moisture absorption, it is fully food compliant and ideal for scanning equipment, food processing, and packaging systems.

Properties

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

Applications

- Scanning equipment
- Food processing
- Packaging

Forms



Solid Rod



Sheet

PE 1000 - MD

Technical Properties

Physical	Unit	Test Method	Result
Specific gravity	g/cm ³	ISO 1183-1	1.07
Water absorption until saturation at 23°C	%	ISO 62	<0.1
Maximum service temp. Upper temp limit – short term	°C	-	-
Maximum service temp. Upper temp limit – long term	°C	-	80
Lower temp limit	°C	-	-150
Mechanical	Unit	Test Method	Result
Tensile strength	MPa	ISO 527-1/-2	20
Elongation at yield	%	ISO 527-1/-2	17
Tensile strength at break	MPa	ISO 527-1/-2	>50
Unnotched impact strength	kJ/m ²	ISO 179-1/1eU	No break
Notch impact strength	kJ/m ²	ISO 179-1/1eA	107P
Ball indentation / Rockwell hardness	MPa	-	-
Shore-D		ISO 868	62
Flexural modulus of elasticity	MPa	ISO 178	660
Tensile modulus of elasticity	MPa	ISO 527-1/-2	670
Thermal	Unit	Test Method	Result
Vicat-softening point VST/B/50	°C	-	-
Heat deflection temperature HDT/B	°C	ISO 75-1/-2	40
Coefficient of linear thermal expansion 23 – 100°C	m/(m.K)	-	230
Thermal conductivity at 23°C	W/mK	-	-
Electrical	Unit	Test Method	Result
Volume resistivity	Ω x m	-	-
Surface resistivity	Ω	-	-
Insulation resistivity	Ω . cm	-	-
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		-	-
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.