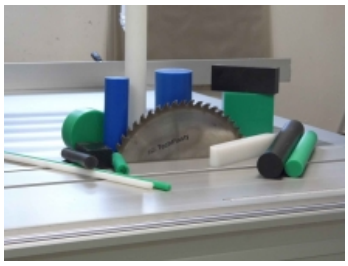
PE1000 - Polyethylene 1000

Other material names PE1000 : PE 1000, PE UHMW
Material group: Polyethylene



Construction sliding material with high resistance to abrasion and wear. It has high impact and notch strength without fracture and low friction coefficient. It is hygienic (only for certain colors) and low density - lighter than water. It features a high chemical resistance.
The highest continuous use temperature is 80 degrees Celsius, bearing below freezing point excellently. When limiting use with higher temperature or higher required allowable pressure you may consider using PA6G + oil or PET-GL. When limiting the price you can consider using the PE1000R or PE500, however, the inferior sliding properties of these cheaper materials need to be considered.

Color of material:

Natur	Green	Blue	Black

Typical applications:

- Chain guides.
- Guides for conveyor belts and belts.
- Unloading hoppers and chutes.
- Lateral and lower conveyor lines and conveyed material on lines.
- Sliding and guiding parts of food machines.
- Feeding stars in fillers and labels.
- Can turners.
- Unloading of redler conveyors - bottoms and blades.
- Self-lubricating plain bearings and moldings.




The material is used in:

Beverage industry
Food industry
Automobile industry
Wood processing

Features:

- Very good wear and abrasion resistance
- High impact strength, even at low temperatures
- Excellent chemical resistance
- Low coefficient of friction
- Excellent release properties
- Very low water absorption

- Moderate mechanical strength, stiffness and creep resistance
- Very good electrical insulating and dielectric properties (except static dissipative grades)
- Excellent machinability
- Physiologically inert (several grades are suitable for food contact)
- Good resistance to high energy radiation (gamma- and X-rays)
- Not self-extinguishing

Material availability: Material is in stock

Material properties table

Specific weight	0.93 g/cm³
Yield strength	17 N/mm²
Tensile strength	30 N/mm²
Allowable mean pressure deformation 1%	4.50 N/mm²
Allowable mean pressure deformation 2%	8.00 N/mm²
Allowable mean pressure deformation 5%	14.00 N/mm²
Flexural strength	24 N/mm²
Tensibility	300 %
Flexural modulus	750 N/mm²
Tensile modulus	700 N/mm²
Impact toughness	bez zlomu
Notched toughness	>170 kJ/m²
Ball hardness	35 N/mm²
Friction coefficient	0.12
Sliding wear	0.05 um/km
Abrasive wear	100
Antistatic material	No
Permittivity	2.10
Electrical strength	45 kV/mm
Specific internal resistance	>10^(12) Ω
Specific surface resistance	>10^(13) Ω.cm
Melting point	135 °C
Thermal expansion	20 10^(-5)/K
Thermal conductivity	0.41 W/(K.m)
Permanent use temperature	-200 ; 80 °C
Transient temperature of use	-200 ; 90 °C
Absorbability	0,01 %
Water absorption	0,1 %
Food contact	Yes

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All standard and special materials are designed to meet your specific requirements. Their mechanical, thermal, and electrical properties and chemical resistance satisfy the most demanding requirements and this allows them to work even in the most difficult conditions. If you need advice when choosing the appropriate material for your application, please contact us. We'll gladly advise you. You can utilize the long-term experience of our technical advisors free-of- charge, who can visit you right in your operation and solve your requirements for engineering plastics directly at the site of their usage.

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