

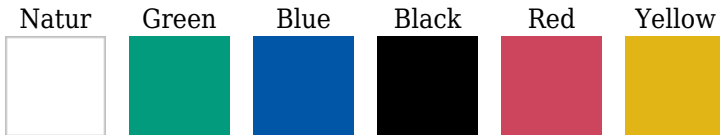
PE500 - Polyethylene 500

Other material names PE500: PE HD500, PE HMW

Material group: Polyethylene

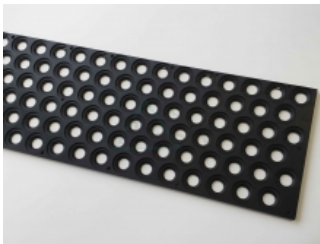
In less demanding applications with respect to wear and impact resistance, PE 500 may present an economical alternative to the PE1000 standard grades. It is a versatile polyethylene grade used mainly in the food industry (meat and fish processing) but is also employed in all kinds of mechanical, chemical and electrical applications.

Color of material:



Typical applications:

- Buffers
- Cutting boards,
- Chopping boards
- Change parts and protection strips.



The material is used in:

Food industry
Electrotechnical industry
Automobile industry

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	0.95 g/cm ³
Yield strength	20 N/mm ²
Tensile strength	36 N/mm ²

Allowable mean pressure deformation 1%	9.00 N/mm ²
Allowable mean pressure deformation 2%	15.00 N/mm ²
Allowable mean pressure deformation 5%	23.00 N/mm ²
Tensibility	400 %
Tensile modulus	800 N/mm ²
Impact toughness	bez zlomu
Notched toughness	>15 kJ/m ²
Ball hardness	40 N/mm ²
Friction coefficient	0.25
Sliding wear	1.00 um/km
Abrasive wear	400
Antistatic material	No
Permittivity	2.90
Electrical strength	40 kV/mm
Specific internal resistance	10 ¹² Ω
Specific surface resistance	10 ¹² Ω.cm
Melting point	135 °C
Thermal expansion	20 · 10 ⁻⁵ /K
Thermal conductivity	0.41 W/(K.m)
Permanent use temperature	-100 ; 80 °C
Transient temperature of use	-100 ; 90 °C
Absorbability	0,01 %
Water absorption	0,1 %
Resistance - oils	resistant
Acid resistance	conditionally resistant
Durability - alcali	resistant
Food contact	Yes

Engineering plastics are supplied in the form of bars, plates, strips, tubes and sheets. From the semi-finished products the company TechPlasty has regularly in stock, we also supply blanks.

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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