



# Polyurethane (PU)

Elastomeric Engineering Plastic | High Wear Resistance

⚠ Special Grades Are Food Compatible

Material Type

**PU/PUR Elastomer**

Form: Plate / Rod / Block / Special

Hardness: **20-90 Shore A/D**

## MATERIAL DESCRIPTION

Polyurethane (PU) is a versatile elastomeric engineering material that can be produced in a wide spectrum of elasticity and rigidity, with hardness adjustable from 20 Shore A to 90 Shore D. It is a unique material that fills the gap between rubber and plastic with its high wear resistance, excellent oil resistance and outstanding energy absorption capacity. It is widely preferred in cylinders, cast couplings and wear plates.

## MECHANICAL AND PHYSICAL PROPERTIES (ISO/ASTM)

Feature	Unit	Value	Feature	Unit	Value
Intensity	g/cm <sup>3</sup>	1.10 – 1.25	Hardness	Shore	<b>20-90 A/D</b>
Breaking Stress	MPa	20 – 50	Friction Coefficient	—	<b>0.40 – 0.60</b>
Elongation at Break	%	300 – 600	Service Temperature	°C	<b>-30 / +80</b>
Elasticity Modulus	MPa	10 – 500	Work. Gene. Coefficient	10 <sup>-4</sup> K <sup>-1</sup>	<b>1.5</b>
Impact Resistance	kJ/m <sup>2</sup>	Very High	Dielek. Strength	kV/mm	<b>15 – 20</b>
Water Absorption (24h)	%	0.5 – 1.0	Surface Resistance	Ohm	<b>10<sup>11</sup></b>
Yield Stress	MPa	elastomeric	Combustion Class	UL 94	<b>HB</b>

## AREAS OF APPLICATION

Wear and Impact Plate

Cylinder and Roll Coatings

Couplings and Vibration Dampers

Mining Hardware

Automotive Suspension

Conveyor and Screening Equipment

## CHEMICAL RESISTANCE AND GENERAL PROPERTIES

It shows excellent resistance to oil, grease and hydrocarbon fuels; It offers long-lasting performance in industrial lubricated environments. It shows moderate resistance to strong acids and bases; Concentrated chemicals should be avoided. It cannot be joined by traditional welding method; It is applied by gluing or casting. The wide hardness range (20-90 Shore) offers the designer flexibility and a wide range of functions from impact to hardness. It is widely preferred as a high-performance alternative to rubber in impact and wear management applications in heavy industry, mining, automotive and logistics sectors.

The technical information specified in this document reflects the reference values of international ISO/ASTM standards. Mechanical properties can vary significantly depending on hardness (Shore).

**CORUM BRONZE**

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