

## Datasheet ▸

# HDPE

*(High Density Polyethylene)*

## Details

This material is light in weight with high strength. It is resistant to chemicals and heat, impermeable and has good electrical insulation. It is highly ductile and is impact resistant. This material works well in both hot and cold temperatures. It is ideal for use in heavy construction, plumbing, agriculture and medical products.

## Key Features

Lightweight • Strong • Ductile

## Thermal Properties

Property	Value
Heat deflection [°C]	64 – 77
Glass transition temperature [°C]	-110
Vicat softening temperature [°C]	124
Coefficient of thermal expansion [ $K^{-1} \cdot 10^{-6}$ ]	130
Thermal conductivity [ $W/m \cdot K$ ]	0.35 – 0.43
Specific heat capacity [ $J/kg \cdot K$ ]	1.7 – 2
Melting point [°C]	126

## Mechanical Properties

Property	Value
Tensile strength [MPa]	25
Modulus of elasticity [GPa]	0.9 – 1.55
Flexural strength [MPa]	36.68

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Flexural modulus [GPa]	0.97 – 1.38
Hardness	43
Impact strength [KJ/m <sup>2</sup> ]	71
Elongation at break [%]	9

## Physical Properties

Property	Value
Density [g/cm <sup>3</sup> ]	0.947
Water Absorption [%]	0.005
Electrical Resistivity [ohm-cm]	16×10 <sup>15</sup>

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