

# Data Sheet: ABS

(Acrylonitrile Butadiene Styrene)

## Details

This is a thermoplastic material widely known for its high resistance to impact and toughness. In addition, it has good scratch resistance and rigidity as well as a low melting point. With a high strength – to – weight ratio, it is well suitable for injection molding. It is used in the manufacturing, automotive and marine industries.

## Key Features

Tough • Strong • Resistant to impact and scratches

## Thermal Properties

Property	Value
Heat deflection [°C]	88 – 89
Glass transition temperature [°C]	105
Vicat softening temperature [°C]	100
Coefficient of thermal expansion [K-1 · 10-6]	120
Thermal conductivity [W/m · K]	0.1
Specific heat capacity [J/kg · K]	900

## Mechanical Properties

Property	Value
Tensile strength [MPa]	42.5 – 44.8
Modulus of elasticity [GPa]	2.0 – 2.6
Flexural strength [MPa]	60.6 – 73.1
Flexural modulus [GPa]	2.25 – 2.28

Hardness	103 - 112
Impact strength [KJ/m <sup>2</sup> ]	20
Elongation at break [%]	23 - 25

## Physical Properties

Property	Value
Density [g/cm <sup>3</sup> ]	1.06
Water Absorption [%]	0.2
Electrical Resistivity [ohm-cm]	10 <sup>15</sup>

## Reference

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