Xometry

Manufacturing On Demand

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

Xometry

Manufacturing On Demand

Hardness	103 – 112
Impact strength [KJ/m^2]	20
Elongation at break [%]	23 – 25

Physical Properties

Property	Value
Density [g/cm^3]	1.06
Water Absorption [%]	0.2
Electrical Resistivity [ohm-cm]	10^{15}

Reference

Datasheets provided by Xometry contain materials sourced through trusted OEMs, material distributors, and databases. Please visit Materialdatacenter.com for further information on this material.