

Data Sheet: Polysulfone (PSU)

Details

This is a transparent material. It is tough and rigid with good thermal stability and resistance to chemicals. It has high strength and can operate at high temperatures of 160C. It has good electrical insulation properties and dimensional stability. It is used for automotive parts, medical components, electrical insulators and appliances.

Key Features

Thermally stable • Resistant to chemicals • Strong

Thermal Properties

Property	Value
Heat deflection [°C]	189
Glass transition temperature [°C]	214
Vicat softening temperature [°C]	183
Coefficient of thermal expansion [K-1 · 10-6]	56
Thermal conductivity [W/m · K]	0.27
Specific heat capacity [J/kg · K]	1900
Melting point [°C]	188

Mechanical Properties

Property	Value
Tensile strength [MPa]	70.3
Modulus of elasticity [GPa]	2.48
Flexural strength [MPa]	106

Flexural modulus [GPa]	2.69
Hardness	77.3
Impact strength [KJ/m ²]	420
Elongation at break [%]	50

Physical Properties

Property	Value
Density [g/cm ³]	1.35
Water Absorption [%]	0.3
Electrical Resistivity [ohm-cm]	15×10^{15}

Reference

Datasheets provided by Xometry contain materials sourced through trusted OEMs, material distributors, and databases. Please visit [Materialdatacenter.com](https://www.materialdatacenter.com) for further information on this material.