

**Material Specification
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Polypropylene (PPH)**General Information**

Polypropylene (PP) is a plastic polymer, tough and lightweight with low water absorption and often chosen for its resistance to corrosion and excellent chemical resistance. Polypropylene offers an excellent combination of mechanical, physical, thermal and electrical properties compared to other plastics. This low-cost plastic is often compared to high density polyethylene (HDPE), although it has lower impact strength, Polypropylene has superior tensile strength and working temperature. Polypropylene provides outstanding resistance to organic solvents, degreasing agents and electrolytic attack. This material is resilient against most forms of physical damage, including impact and freezing.

Polypropylene homopolymer or PPH for short is stronger and stiffer than copolymer and more widely used. With the combination of excellent chemical resistance and the ability to be joined and welded by heat fusion makes this an ideal plastic for chemical tanks and structures in corrosive environments.

Property	Test Method	Unit	Result
Specific Gravity	ISO 1183	g/cm ³	0.91
Water Absorption	ISO 62	%	0.01
Maximum service – Higher temp limit	-	°C	100
Maximum service – Lower temp limit	-	°C	0
Mechanical Properties			
Tensile strength at yield	ISO 527	MPa	33
Elongation at yield	ISO 527	%	8
Tensile strength at break	ISO 527	MPa	-
Elongation at break	ISO 527	%	80
Impact strength	ISO 179	kJ/m ²	no break
Notch impact strength	ISO 179	kJ/m ²	9
Ball indentation / Rockwell hardness	ISO 2039-1	MPa	70
Sore – D	DIN 53505	-	72
Flexural strength	ISO 178	MPa	-
Modulus of elasticity	ISO 527	MPa	1700
Vicat – softening point VST/B/50	ISO 306	°C	-
Heat deflection temperature HDT/B	ISO 75	°C	-
Heat deflection temperature HDT/A	-	°C	-
Coefficient / linear thermal expansion	DIN 53752	K ⁻¹ *10 ⁻⁶	1.6
Thermal conductivity at 20oC	DIN 52612	w/(m*k)	0.22
Electrical Properties			
Volume resistivity	VDE 0303	Ω x m	-
Surface resistivity	-	Ω	10 ¹⁴
Dielectric constant at 1MHz	-	-	-
Dielectric loss factor at 1MHz	DIN 53483	-	-
Dielectric strength	VDE 0303	kV/mm	52
Tracking resistance	IEC 60112	-	-
Additional data			
Bondability	-	-	-
Food compliance	FDA	-	-
Flammability	UL 94	-	HB

The information given above is based upon average values and is no way intended as a warranty. The purchaser is deemed responsible for determining the suitability of the product for any application. All data relating to suitable uses and description information concerning our products are compiled from research and are believed to be reliable but are provided for guidance purposes only. The Company holds no legal or contractual responsibility for information supplied

