



Polyether Ether Ketone (PEEK) 30% Glass-Fiber Reinforced Fastener Data Sheet

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Polyether Ether Ketone (PEEK) Fastener Properties:

Mechanical Properties	Unit	Test Method	Value
Tensile Strength	MPa	ISO527	168
Tensile Elongation	%	ISO527	2.1
Bending Strength	MPa	ISO527	259.0
Bend Elastic Constant	GPa	ISO527	11.5
Charpy Impact Strength	KJ/m ²	ISO179/1eA	57C
Rockwell Hardness	M Scale	D785	M99

Torsional Rupture Torque (N*m)				
Metric size (M)	M2	M3	M4	M5
Standard Head Types	0.09	0.27	0.64	1.45

*Numerical Values are calculated using mean average.

*The recommended fastening torque for each screw type is 50% of the Torsional Rupture Torque value shown in the table.

Tensile Rupture Force (N)				
Metric size (M)	M2	M3	M4	M5
Standard Head Types	262	532	909	1756

Thermal Properties	Unit	Test Method	Value
Deflection under load Temperature (1.82MPa)	°C	ISO75 / ASTM D648	327.0
Combustibility		IEC 60695	V-0

Electrical Properties	Unit	Test Method	Value
Volume Resistance	Ω*cm	IEC 60093	10 ¹⁵
Insulation Breakdown strength		D149	16KV/mm
Arc Resistance	Sec	D495	23
Permittivity (106Hz)		IEC 60250	3.8
Dielectric tangent (1MHz)		IEC 60250	0.007

Physical Properties	Unit	Test Method	Value
Density	g/cm ³	ISO 1183	1.52
Water Absorption Rate (23 °C x 24Hr)	%	ISO62	0.05

Polyether Ether Ketone (PEEK) Chemical Resistance Data:

Acid	Resistance
Hydrochloric acid 10%	○
Sulphuric acid 10%	○
Sulfuric acid 50%	X
Nitric acid 10%	○
Nitric acid 50%	X
Hydrofluoric acid 10%	-
Hydrofluoric acid 50%	X
Phosphoric acid	○
Formic acid	Conditional
Acetic acid	○
Citric acid	○
Chromic acid	○
Boric acid	○

Alcohol	Resistance
Methanol	○
Butanol	○
Glycol	○

Aldehyde and Ketone	Resistance
Acetaldehyde	○
Acetone	○
Formalin	○
Methyl ethyl ketone	○

Base – Alkali	Resistance
Ammonia	○
Sodium hydroxide 10%	○
Calcium hydroxide	○

Halogenated organics	Resistance
Carbon tetrachloride	○
Perchloro ethylene	○
Freon 12	○

Hydrocarbon	Resistance
Benzene	○
Toluene	○
Xylene	○
Cyclohexane	○
Naphthalene	○

Inorganic chemicals	Resistance
Water	○
Hydrogen sulphide (gas)	○
Sulphur dioxide	○
Sodium chloride	○
Ammonium nitrate	○
Sodium nitrate	○
Sodium acetate	○
Calcium carbonate	○
Calcium chloride	○
Magnesium chloride	○
Magnesium sulphate	○
Zinc sulphate	○
Hydrogen peroxide	○

Other Chemicals	Resistance
Urea	○
Detergent	○

- : Can be used
 X : Cannot be used
 - : No data

* Chemical test data shown conducted at room temperature (23°C) *

* Chemical resistance changes in line with operating environment, ensure to test under actual use environment beforehand. *

Storage conditions

- Avoid direct sunlight and store at room temperature
- Keep fasteners in the original zip lock bag to avoid dust.
- Please store in a sealed container if removed from zip lock bag.
- Do not place heavy objects on fasteners to avoid damage