



Complete Technical Documentation

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PEEK Mod 277/110x1000 mm black

Article No. P1501099

1. Technical Data Sheet

Property	Value	Unit	Test standard
Density	1.31	g/cm ³	ISO 1183
Water absorption to saturation	0.2	%	ISO 62
Water Absorption to Saturation	0.45	%	ISO 62
Tensile Strength	112	MPa	ISO527-2
Modulus of elasticity (tensile)	4400	MPa	ISO 527-2
Breakdown Voltage	67	MPa	ISO 527
Break Elongation	20	%	ISO 527-2
Flexural Strength	110	MPa	ISO 527-2
Notched impact strength (Charpy)	3.5	kJ/m ²	ISO 179/1eA
Impact Resistance (Charpy)	92	kJ/m ²	ISO179/1eU
Hardness Shore D	90	° Shore D	DIN EN ISO 868
Ball pressure hardness	230	MPa	ISO 2039-1
Melting point	340	°C	ISO 3146
Maximal operating temperature (short-term)	291	°C	UL746B
Maximum Operating Temperature	245	°C	
Minimum temperature	-35	°C	
Heat deflection temperature (HDT/A)	160	°C	ISO 75-2
Heat deflection temperature (HDT/B)	240	°C	ISO 75
Vicat softening temperature (VST/B/50)	50	°C	ISO 306
Thermal Conductivity	0.25	W/(m·K)	DIN 52612
Thermal Expansion Coefficient	0.5	10 ⁻⁴ /K	DIN 11359
Dielectric Strength	24	kV/mm	IEC 60243-1
Volume Resistivity	10 ¹⁴	Ω·cm	IEC 60093
Dielectric Constant (1 MHz)	3.6	-	IEC 60250
Dielectric Constant (100 Hz)	3.2	-	IEC 60250

Property	Value	Unit	Test standard
Dielectric loss factor (1 MHz)	0.0	-	IEC 60250
Dielectric loss factor (100 Hz)	0.0	-	IEC 60250
Surface Resistivity	10 ¹³	Ω	IEC 60093
Comparative Tracking Index (CTI)	150	V	IEC 60112
Flammability Classification (UL 94)	0		UL 94

2. Chemical Resistance

● Resistant
 ● Partially resistant
 ● Not resistant

Chemical	Concentration	Resist.
1,4-Dioxane	100	●
2-Hydroxypropionic acid (lactic acid)	90	●
Acetic acid	100	●
Acetone	100	●
Ammonia	—	●
Ammonium chloride	—	●
Amyl alcohol	—	●
Apple juice	—	●
Benzene	—	●
Boric acid	100	●
Brake fluid	—	●
Butyl acetate	—	●
Calcium chloride	—	●
Carbon tetrachloride	—	●
Chlorine (gas)	100	●
Chlorobenzene	100	●
Chloroform	—	●
Citric acid	10	●
Cyclohexanone	100	●
Cyclohexene	100	●
Diesel	—	●
Diethylene oxide	—	●
Ethyl acetate	100	●

Chemical	Concentration	Resist.
Ethyl alcohol (ethanol)	96	●
Ethylene chloride	100	●
Food oil	—	●
Formaldehyde (aqueous)	40	●
Formic acid	10	●
Frost protection agent	—	●
Fuel oil	—	●
Fuel, aromatic free	—	●
Glycerine	100	●
Glycol	100	●
Heptane	100	●
Hydrochloric acid	10	●
Hydrochloric acid (concentrated)	—	●
Hydrofluoric acid	40	●
Hydrogen peroxide	10	●
Hydrogen sulfide (aqueous)	—	●
Isopropyl alcohol	100	●
Linseed oil	—	●
Mercurochrome	—	●
Methyl alcohol (methanol)	100	●
Methyl ethyl ketone (MEK)	100	●
Methylene chloride	100	●
Milk	—	●
Mineral oils (aromatic free)	—	●
Nitric acid	50	●
Nitric acid	10	●
Nitrobenzene	—	●
Oxalic acid	—	●
Ozone (gas)	—	●
Paraffin oil	100	●
Perchloroethylene	—	●
Petroleum	100	●

Chemical	Concentration	Resist.
Petroleum ether	100	●
Phenol (aqueous)	9	●
Phosphoric acid	50	●
Potassium hydroxide solution	50	●
Premium fuel	—	●
Propyl alcohol	—	●
Pyridine	—	●
Silicone oil	—	●
Sodium carbonate (aqueous)	—	●
Sodium chloride (aqueous)	—	●
Sodium hydrogen sulfite	—	●
Sodium hydroxide solution (caustic soda)	60	●
Sodium hydroxide solution (caustic soda)	15	●
Sodium nitrate (aqueous)	—	●
Sodium thiosulfate	—	●
Sulphuric acid	96	●
Tetrahydrofuran (THF)	100	●
Toluene	100	●
Transformer oil	—	●
Trichloroethylene	100	●
Vinegar (standard)	5-10	●
Water	—	●
Xylene	—	●