

Nylon 6 Sheet & Rod - Cast Natural



Physical Properties	Test	Unit	Result
1. Specific gravity	ISO 1183-1	g/cm ³	1.15
2. Water absorption till saturation 23°C	-	%	6.5
3. Maximum service temp. Upper temp limit - Short Term (no stronger mechanical stress involved)	-	°C	170
Long Term	-	°C	105
5. Lower temp limit	-	°C	-30

Mechanical Properties	Test	Unit	Result
1. Tensile stress at yield	ISO 527-1/-2	MPa	86/-
2. Elongation at yield	-	%	-
4. Tensile strain at break	ISO 527-1/-2	%	25
5. Unnotched impact strength	ISO 179-1/1eU	kJ/m ²	no break
6. Notch impact strength	ISO 179-1/1eA	kJ/m ²	3
7. Ball indentation / Rockwell hardness	ISO 2039-1/-2	MPa	165 / M88
8. Shore-D	-	-	-
9. Flexural modulus of elasticity	-	MPa	-
10. Tensile modulus of elasticity	ISO 527-1/-2	MPa	3600

Thermal Properties	Test Method	Unit	Result
1. Vicat-softening point VST/B/50	-	°C	-
2. Heat deflection temperature HDT/A	ISO 75-1/-2	°C	80
3. Coefficient of linear thermal expansion 23°C - 100°C	-	m/(m.K)	90 x 10 ⁻⁶
4. Thermal conductivity at 23°C	-	W/(m*K)	0.29

Electrical Properties	Test Method	Unit	Result
1. Volume resistivity	IEC 6093	Ω x m	>10 ¹⁴
2. Surface resistivity	IEC 6093	Ω	>10 ¹³
3. Dielectric constant at 1MHz	-	-	-
4. Dielectric dissipation factor at 1 MHz	IEC 60250	10 ⁶ Hz	0.016
5. Electrical strength	IEC 60243-1	kV/mm	25
6. Comparative tracking index (CTI)	IEC 60112	-	600

Additional Data	Test Method	Unit	Result
1. Bondability	-	-	-
2. Food compliance	FDA	-	+
3. Flammability	UL 94	-	HB

Key:

Yes	Limited	No or no data
+	o	-

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Agent	Conc %	Working Temp	
		20°C	60°C
Acetic Acid	100	-	-
Acetone	100	o	o
Ammonia	Conc.	+/o	-
Ammonium chloride		+	
Amyl Alcohol		+	
Benzene		+	+
Bleaching Solution	12,5 Cl	-	-
Boric Acid	100	+/o	o
Brake Fluid		+	+
Butyl Acetate		+	
Calcium Chloride		+	+
Carbon disulphide	100	+	-
Carbon Tetrachloride		+	
Chlorine, gas	100	-	
Chlorobenzene	100	+	
Chloroform		-	-
Citric Acid	10	+	
Cresol		-	-
Cyclohexanone	100	+	
Cyclohexene	100	+	+
Diesel Fuel		+	+
Ethyl acetate	100	+	
Ethyl alcohol	96	+	+
Ethylene Chloride	100	+	
Formic Acid	10	-	-
Frost protection agent		+	+
Fuel, aromatic free		+	+
Glycerine	100	+	+
Glycol	100	+	o
Heating oil		+	+
Heptane	100	-	-
Hydrochloric acid	10	-	-
Hydrochloric acid	Conc.	-	-

Agent	Conc %	Working Temp	
		20°C	60°C
Hydrofluoric acid	40	-	-
Hydrogen peroxide	10	+/o	-
Hydrogen Sulphide		+	
Isopropyl Alcohol	100	+	+
Mercurochrome		-	-
Methyl alcohol	100	+	
Methyl ethyl ketone	100	+	
Methylene chloride	100	o	o
Nitric acid	50	-	-
Nitrobenzine		o	
Oxalic Acid		o	
Ozone, gas	ca. 0,5 ppm	-	-
Paraffin Oil	100	+	+
Perchlorethylene		o	-
Petroleum	100	+	
Petroleum, aromatic free	100		
Phenol, aqu	ca.9	-	-
Phosphoric Acid	50	-	-
Potassium hydroxide liquor	50	o	+
Propyl alcohol			
Pyridine		+	o
Silicone oil		+	+
Sodium carbonate, aqu		+	+
Sodium chloride, aqu		+	+
Sodium Hydroxide liquor	15	+	
Sodium Hydroxide liquor	60	o	
Sodium hydrogen sulphite		+	
Sodium nitrate, aqu		+	
Sodium thiosulfate			
Sulphuric Acid	96	-	-
Tetrahydrofuran	100	+	
Toluene	100	+	+
Trichlorethylene	100	-	-
Xylene		-	-

Key:

Resistant	Partly Resistant	Non-Resistant
+	o	-

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