

Typical Properties of Unreinforced MAGNACETAL[®]

Properties	Unit	Test Method			Condition Of Specimen	Magnacetal	
		DIN	ISO	ASTM			
Mechanical Properties							
Tensile strength at break	MPa	--	--	D638	Dry	68.9	
Elongation at break	%	--	--	D638	Dry	75	
Flexural Modulus	MPa	--	--	D790	Dry	2620	
Yield Strength	MPa	--	--	D790	Dry	98.6	
Shear Strength	MPa	--	--	D732	Dry	65.5	
Izod notched impact strength, method A +23°C	J/m	--	--	D256	Dry	123.0	
-40°C	J/m	--	--	D256	Dry	69.1	
Deformation Under load 14.0 MPa (50 °C)	MPa	--	--	D621	Dry	0.5	
Compressive Stress 1% Deformation	MPa	--	--	D695	Dry	35.9	
Modulus of elasticity	MPa	--	--	D638	Dry	3100	
Tensile Impact Long Specimen	KJ/m ²	--	--	D1882		350	
Thermal Properties							
Heat Deflection Temperature	1.8MPa	°C	--	--	D684	Dry	136
	0.5MPa	°C	--	--	D684	Dry	172
Melting Point		°C	--	--	D2133	--	175
Heat capacity							
Average over range -18 C tp +100C		KJ/kg °C					1.47
Thermal Coefficient of linear expansion		m/m/°C	--	--	D696	Dry	10.4 x 510
Thermal conductivity		W/(K· m)				Dry	0.37
Specific heat							0.35
Dielectric Properties							
Dielectric constant	1 MHz	--	--	--	D150	Dry	3.7
Dissipation factor tan <0	1 MHz	--				Dry	0.005
Dielectric strength [short time 2.3mm]		MV/mm	--	--	D149	Dry	19.7
Volume resistivity		Ω · cm	--	--	D257	Dry	1 x 10 ¹⁵
Ignition temperature OA	Flash ignition	°C	--	--	D1929	Dry	656
	Self ignition	°C	--	--	D1929	Dry	376
Arc resistance							
Flame extinguishes self when arc stops (3.1mm)		Sec.	--	--	D496	Dry	221
Miscellaneous Properties							
Mass density		g / cm ³	--	--	D792	Dry	1.42
Moister absorption – 24 hour		%	--	--	D570	Dry	.25
Water absorption	Saturation	%	--	--	D570	Dry	.90
Acid & base resistance	Limited, attacked by strong acids, bases and oxidizing agrnts						
Agricultural chemicals	Excellent resistance to agricultural chemicals and fertilizers						
Sovent resistance	Exeptionly resistant to solvents, retaining over 90% of its tensile strength to almost all solvents						