

POLYSTONE® D black nuclear

High Molecular Weight Polyethylene

Röchling Engineering Plastics SE & Co. KG

Message:

Product characteristics

Shielding against neutron radiation

Excellent mechanical properties

Typical field of application

Electrical and electronic industries

General Information			
Features	Radiaton Shielding		
Uses	Electrical/Electronic Applications		
Appearance	Black		
Physical	Nominal Value	Unit	Test Method
Density	1.06	g/cm ³	ISO 1183
Water Absorption (Equilibrium, 23°C, 50% RH)	< 0.010	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	70		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1450	MPa	ISO 527-2
Tensile Stress (Yield)	18.0	MPa	ISO 527-2
Tensile Strain (Break)	7.0	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	No Break		ISO 179
Thermal	Nominal Value	Unit	Test Method
Continuous Use Temperature ¹	< 100	°C	
Melting Temperature	135	°C	ISO 11357-3
CLTE - Flow	1.5E-4 - 2.3E-4	cm/cm/°C	DIN 53752
Specific Heat	1900	J/kg/°C	DIN 52612
Thermal Conductivity	0.40	W/m/K	DIN 52612
Heat Deflection Temperature - Vicat B	79	°C	ISO 306
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+11	ohms	IEC 60093
Volume Resistivity	> 1.0E+14	ohms · cm	IEC 60093
Dielectric Strength	15	kV/mm	IEC 60243-1
Dielectric Constant	2.50		IEC 60250
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
3.00 mm	HB		UL 94

6.00 mm	HB	UL 94
Additional Information		
Service Temperature (Long Term): -100 to 80°C		
NOTE		
1.	Short Term	

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