PVC

POLYVINYL CHLORIDE

Material description

PVC hard is an amorphous thermoplastic and plasticiser-free. The material can be offered transparent as well as in different colours. At a comparatively low price, PVC has a number of outstanding properties. PVC has very good chemical resistance and therefore has only a slight tendency to stress cracking. In addition, this material is characterised by its high mechanical strength, rigidity and hardness. However, its impact strength is low. PVC can be used in the long term over a temperature range of 0-60 °C. Rigid PVC can be bent, glued, welded, and painted.

Conformities

RoHS, REACH

Physical properties	Test method	Value	Unit
Density	DIN EN ISO 1183-1	1.45	g/cm3
Water absorbtion	DIN EN ISO 62	0.2	%
Sliding friction		◔	
Abrasion resistance		◔	

Mechanical properties	Test method	Value	Unit
Yield stress	DIN EN ISO 527	57	MPa
Elongation at break	DIN EN ISO 527	>10	%
Tensile modulus of elasticity	DIN EN ISO 527	3000	MPa
Notched impact strength	DIN EN ISO 179	3	kJ/m2
Shore Hardness D	DIN EN ISO 868	81	

Thermal properties	Test method	Value	Unit
Thermal conductivity	DIN 52612-2	0.14	W/(m*K)
Heat capacity	DIN 52612-1	0.9-1	kJ/(kg*K)
Coefficient of thermal expansion	DIN 53752	80	10^{-6*K}-1
Operating temperature short term		70	°C
Operating temperature long term		0 bis 60	°C
Heat deflection temperature	DIN EN ISO 75 / A	61	°C
Flammability	UL 94, 3 mm	V0	

Electrical properties	Test method	Value	Unit
Volume resistivity	IEC 60093	10^{15}	Ω * cm
Surface resistivity	IEC 60093	10^{13}	Ω * cm
Dielectric strength	IEC 60243	40	kV/mm
Comparative tracking index (CTI)	IEC 60112	600	CTI

These technical data have been determined as average values by our suppliers from many individual measurements. In all measurements, the test specimens were tested in the dry state. We pass on the data with reservation. The table does not claim to be complete or correct. Material technology is subject to constant further development. No rights or guarantees can be derived from it. Own tests are necessary because the environmental and operating conditions (humidity, temperature, mechanical forces, radiation and chemicals, etc.) set limits in the application.

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