

# HP 2061



## PHENOLIC PAPER / PF CP 201

### Material description

HP 2061 consists of soda or cotton cellulose paper sheets combined with phenolic resins. This material was originally developed as an electrical insulation material. Because of its good mechanical strength and easy machinability, HP 2061 is increasingly being used for components in a wide variety of applications.

### Conformities

RoHS, REACH

Physical properties	Test method	Value	Unit
Density	DIN EN ISO 1183-1	1.4	g/cm <sup>3</sup>
Water absorption	DIN 53495	600	mg
Sliding friction			
Abrasion resistance			

Mechanical properties	Test method	Value	Unit
Tensile strength	DIN 53455	120	MPa
Modulus of elasticity from bending test	ISO 178	7000	MPa
Bending stress at fracture perpendicular to the layer direction	ISO 178	120	MPa
Shear strength parallel to the layer direction	VDE 0318/2	10	MPa
Notched impact strength (Charpy) parallel to the layer direction	DIN 53453	5	kJ/m <sup>2</sup>
Compressive strength parallel to the direction of layering	DIN 53454	150	MPa
Compressive strength perpendicular to the layer direction	DIN 53454	300	MPa

Thermal properties	Test method	Value	Unit
Thermal conductivity	DIN 52612-2	0.2	W/(m*K)
Coefficient of linear expansion	VDE 0304/2	20-40	10 <sup>-6</sup> *K <sup>-1</sup>
Thermal endurance	VDE 0304/2	120	°C

Electrical properties	Test method	Value	Unit
Dielectric strength at 90°C in oil perpendicular to laminations	IEC 60243-1	10.1	kV/mm
Breakdown voltage at 90°C in oil parallel to laminations	IEC 60243-1	30	kV
Comparative tracking index (CTI)	IEC 60112	100	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.