M - 005

TECHNICAL DATA SHEET

CTE Material name: LONBEL® PEEK-1
POLY ETHER ETHER KETONE "1"

Options: Stiffness& Rigidity or low creep tendency

n.t.= Not tested

APPLICATIONS

Precision mechanics, military, electrical and aviation industry, chemical engineering and tanks building

CHARACTERISTICS

Low coefficient of thermal expansion and very low creep tendency
Good dimensional stability
High rigidity, stiffnessand and service temperature

GENERAL PROPERTIES	Unit	Test method	Value	
			Stiffness & Rigidity	Low creep tendency
Density	g/cm³	DIN EN ISO 1183-1	1,4	1,5
Water absorption	%	DIN EN ISO 62	0,1	0,1
Flammability		UL 94	V0 / V0	V0 / V0
MECHANICAL PROPERTIES				
Yield stress	Mpa	DIN EN ISO 527	120	80
Elongation at break	%	DIN EN ISO 527	7	5
Tensile modulus of elasticity	Mpa	DIN EN ISO 527	6500	6000
Notched impact strength	kJ/m²	DIN EN ISO 179	n.t.	3
Shore hardness	scale D	DIN EN ISO 868	91	89
Rockwell hardness	scale R	DIN EN ISO 2039-2	n.t.	n.t.
THERMAL PROPERTIES				
Thermal conductivity	W/(m*K)	DIN 52612-1	0,92	0,43
Thermal capacity	KJ/(kg*K)	DIN 52612	n.t.	n.t.
Coeefficient of linear thermal expansion	10^{-6}/K	DIN 53752	25	30
Service temperature long term	ºC	Average	-20 / 250	-20 / 250
Service temperature short term max.	ºC	Average	310	310
Vicat softening temperature	ºC	DIN EN ISO 306, Vicat B	n.t.	n.t.
Heat deflection temperature	ºC	DIN EN ISO 75, Verf. A, HDT	315	315
Crystalline grain melting range	ºC	ISO 11357-3	343	343
ELECTRICAL PROPERTIES	**ºC**			
Volume resistivity	Ω	DIN EN 61340	n.t.	n.t.
Surface resistivity	Ω	DIN EN 61340	n.t.	n.t.
Volume resistivity	Ω * cm	IEC 60093	$< 10^{4}$	10^{14}
Surface resistivity	Ω	IEC 60093	$< 10^{4}$	10^{13}
Dielectric constant		IEC 60250	n.t.	3,2
Dielectric dissipation factor (50 Hz)		IEC 60250	n.t.	0,001
Comparative tracking index		IEC 60112	n.t.	175
Dielectric strength	Kv/mm	IEC 60243	n.t.	20

CTE CROISSET THERMOPLASTICS ENGINEERING, S.L.