

Bakelite® PF 31-9005-S 6

Reviewed on: 03.06.2013

Property:	Standard	typical Value	Unit
Density * (23 °C)	ISO 1183	1,43	g/cm ³
Apparent density (moulding compounds)	ISO 60	0,62	g/cm ³
Injection - Moulding shrinkage	ISO 2577	0,75	%
Injection - Post shrinkage	ISO 2577	0,45	%
Compression - Moulding shrinkage	ISO 2577	0,55	%
Compression - Post shrinkage	ISO 2577	0,4	%
Tensile strength * (5mm/min)	ISO 527 - 1/2		MPa
Tensile modulus * (1mm/min) ①	ISO 527 - 1/2		MPa
Compressive strength (test specimen flat tested)	ISO 604		MPa
Flexural strength (2mm/min)	ISO 178	95	MPa
Flexural modulus	ISO 178	7.500	MPa
Charpy impact strength * (23 °C)	ISO 179-1 eU	7,0	kJ/m ²
Charpy notched impact strength * (23 °C)	ISO 179-1 eA	1,5	kJ/m ²
Ball indentation hardness (H961/30)	ISO 2039/P1		MPa
Temp. of deflection under load. HDT C-8,0MPa *ISO 75-2		115	°C
Surface resistivity * ②		1E+10	Ohm
Volume resistivity * ②		1E+11	Ohm * cm
Dissipation factor * (100 Hz) ③		0,3	
Relative permittivity * (100 Hz) ③		9,0	
Electric strength * (1mm thickness) ④	IEC 60243-P1		kV/mm
Proof tracking index * (Test liquid A)	IEC 60112		PTI
Flammability UL 94 ⑤	UL 94	V-1 / 1,5mm (ALL) V-0 / 3,0mm (ALL)	Step/mm
Water absorption (24h / 23°C) ⑥		45	mg
Additional characteristics	UL, Typ		
Product oriented characteristics:	Glow wire test at 960°C / 3mm wall thickness approved ; CTI - 125V		

Storage capability

2 years

(relative humidity of 50 - 60 % and maximum storage temperature of approximate 20°C)

Product description:

Phenolic moulding compound, mainly organically filled, standard moulding compound for normal stress, UL listed moulding compound 1.5 mm / V-1 (ALL), 3.0 mm / V-0 (ALL), standardized moulding compound.

Application areas:

Mouldings of all kinds from screw caps to large casings, electrical installation material, handle casings (bars), pan handles, operating elements, toaster parts and pistons for braking power energizers, carbon brush holders, lamp casing parts, decor items, ashtrays.

Moulding conditions: Bakelite® PF 31-9005-S 6

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Injection molding

Temperature of material	80 - 100 °C
Mould temperature	160 - 190 °C
Curing time (per mm of wall thickness)	10 - 20 s
Barrel temperature - Feed zone	60 - 75 °C
Barrel temperature - Nozzle zone	80 - 100 °C
Cavity moulding pressure	>15 MPa
Back pressure	0,5 - 2 MPa
Holding pressure	ca. 60% of injection pressure

Compression moldin

Mould temperature	160 - 190 °
Curing time (per mm of wall thickness)	20 - 40 s
Cavity moulding pressure	>15 MPa

Technical Customer service:

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 Internet: www.hexion.com

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 Tel.: +49 (0) 2374/925-214
 Fax : +49 (0) 2374/925-336

Additional characteristics (see datasheet):

.5 - Improved electrical properties	HT - Resistant to high temperatures
.7 - Allowed for contact with food	LB - High arc resistance
.9 - Ammonia free	M - Dishwasher proof
A - High surface quality	P - Prod. of test spec. only comp. moulding
Cu - Copper adhesive	T - Low coefficient of friction
D - Low shrinkage / good dimensional stability	Typ - Standardized moulding compounds
E - Elastified	UL - UL listed moulding compound
EL - For electrostatic coating	UV - Non fade
ES - Acetic acid free	V - yellowing resistance
G - galvanize	Z - Special presentation cyl. pellets
HS - High mechanical strength	L - conductiv

Explanations:

- ① Elongation ϵ_1 0,05% , ϵ_2 0,25%
- ② Following IEC 60093
- ③ Following IEC 60250
- ④ Short term, electrode layout P25mm/P25mm in transformer oil equivalent to IEC 60296.
- ⑤ UL 94 colour designation:
 ALL = all colours, BG = beige, BK = black, BN = brown, BL = blue, GN = green,
 GY = grey, NC = natural, OR = orange, RD = red, WT = white, YL = yellow
- ⑥ Following ISO 62

Properties marked with * are elements of the database CAMPUS
 (Computer Aided Material Preselection by Uniform Standards) and are based on the
 obliging introduced guide lines of the norm comitee of plastic.
 (CAMPUS: is a registrated trademark of the CWFG)

Preparation of test specimens of themosetting moulding compounds:

Compression to ISO 295 , Injection to ISO 10724

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