PLASTUM Trading s.r.o.

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Materiálový list

Obchodní označení	POM C MG (Medical grade)
Označení dle DIN EN ISO 1043	POM
Modifikace	none

Vlastnosti	*Jednotka*	*Metoda testování*	*Hodnota*
Obecné vlastnosti			
Hustota	g/cm³	DIN EN ISO 1183-1	1,41
Absorpce vlhkosti			
Saturace na vzduchu při 23°C/50% RH	%	DIN EN ISO 62	0,20
Saturace při ponoření ve vodě při 23°C	%	DIN EN ISO 62	0,85
Hořlavost dle UL 94 (síla 3mm/6mm)		ISO 1210 (UL 94)	HB / HB
Mechanické vlastnosti			*Testovací vzorek "na sucho"*
Mez kluzu	MPa	DIN EN ISO 527	67
Deformace při přetržení	%	DIN EN ISO 527	30
Modul pružnosti v tahu	MPa	DIN EN ISO 527	2.800
Vrubová houževnatost - Charpy	kJ/m²	ISO 179/1eA/Pendel 1J	6
Tvrdost - metoda kuličkou	N/mm²	DIN EN ISO 2039-1	150
Tvrdost - Shore	Skala D	DIN 53505	81
Tepelné vlastnosti			
Teplota tání	°C	ISO 11357	165
Tepelná vodivost	W/(mK)	DIN 52612	0,31
Specifická tepelná vodivost	kJ/(kgK)	DIN 52612	1,5
Koeficient lineární tepelné roztažnosti	10^{-6} K^{-1}	Průměrně mezi 20°C-60°C	110
Provozní teplota - dlouhodobá	°C		- 50 až 100
Provozní teplota - krátkodobá, maximální	°C		140
Teplota tepelného průhybu, Metoda A:1,8 MPa	°C	DIN EN ISO 75	110
Elektrické vlastnosti			
Dielektrická konstanta, 50 Hz		IEC 60250	3,8
Dielektrický ztrátový faktor, 50 Hz		IEC 60250	0,002
Vnitřní odpor	Ohm cm	IEC 60093	10^{13}
Povrchový odpor	Ohm	IEC 60093	10^{13}
Odolnost proti plazivým proudům CTI, Sol. A		IEC 60112	600
Dielektrická pevnost	kV/mm	IEC 60243	40

Poznámky:

This material is not intended for the use in medical products that remain for more than 24 hours in the human body or are intended to remain in contact with internal human tissue or blood for more than 24 hours.

The short-term maximum application temperature only applies to very low mechanical stress for a few hours.
The long-term maximum application temperature is based on the thermal ageing of plastics by oxidation, resulting in a decrease of the mechanical properties. This applies to an exposure to temperatures for at least 5.000 hours causing a 50% loss of the tensile strength from the original value (measured at room temperature). This value says nothing about the mechanical strength of the material at high application temperatures. In case of thick-walled parts, only the surface layer ist affected by oxidation from high temperatures. With the addition of antioxidants, a better protection of the surface layer is achieved. In any case, the center area of the material remains unaffected.
The minimum application temperature ist basically influenced by possible stress factors like impact and/or shock under application. The values stated refer to an minimum degree of impact stress.
The electrical properties as stated result from measurements on natural, dry material. With other colours (in particular black) or saturated material, there may be clear differences in the electrical properties.
The values indicated result from numerous individual measurements for an approximation of the values and are to our today's knowledge. They serve as information about our products and are presented as a guide to choose from our range of materials. This, however, does not include an assurance of specific properties or the suitability for particular application purposes that are legally binding. Since the properties also depend on the dimension of the semi-finished products and the degree of crystallisation (e.g. nucleating by pigments), the actual values of the properties of a particular product may differ from the indicated values.