PET Technical Data Sheet

I. General Properties[1)]

	Test method	Unit	Value
1. Specific gravity (ρ)	ISO 1183	g/cm³	1.39
2. Water absorption	ISO 62	%	0.3 max
3. Humidity absorption			0,25
4a. Maximum permissible service temperature	UL746B	°C	105
4b. Lower permissible service temperature			-20

II. Mechanical Properties[1)]

	Test method	Unit	Value
1. Tensile strength at yield (σ_S)	ISO 527	MPa	88
2. Elongation at yield (ε_S)		%	-
3. Tensile strength at break (σ_R)		MPa	-
4. Elongation at break (ε_R)		%	11
5. Impact strength (a_n)	ISO 179	kJ/m²	101
6. Notch impact strength (a_k)			-
7. Ball indentation (H_k)/Rockwell hardness	ISO 2039 - 1	N/mm²	170 / M96
8. Shore-D	ISO 868		81
9. Flexural strength ($\sigma_{B\ 3,5\ \%}$)	ISO 178	MPa	-
10. Modulus of elasticity (E_t)	ISO 527		3550

III. Thermal Properties[2)]

	Test method	Unit	Value
1. Vicat-softening point VST/B/50	ISO 306	°C	-
VST/A/50			-
2. Heat deflection temperature HDT/B	ISO 75		-
HDT/A			80
3. Coef. of linear thermal expansion (α)	ISO 11359	$K^{-1}*10^{-4}$	0,8
4. Thermal conductivity at 20 °C (λ)	ISO 22007-4	W/(m*K)	0,29
5. Glass transition temperature (T_m)	ISO 3146	°C	79 - 82
6. Melting temperature (T_m)			250

IV. Electrical Properties[2)]

	Test method	Unit	Value
1. Volume resistivity (ρ_D)[4)]	IEC 60093	Ω*cm	≥ 10^{13}
2. Surface resistivity (R_o)[4)]		Ω	≥ 10^{13}
3. Dielectric constant at 1MHz (ε_r)	IEC 60250	-	3,2
4. Dielectric loss factor at 1 MHz (tanδ)		-	0,014
5. Dielectric strength	IEC 60243-1	kV/mm	22
6. Tracking resistance	IEC 60112	V	CTI 600

V. Additional Data

	Test method	Unit	Value
1. Bondability	-	-	-
2. Food contact according	EU/10/2011[5)]	-	+
	FDA[5)]	-	+
3. Flammability[3)]	UL 94	-	HB
4. Limiting Oxygen Index (LOI)[2)]	ASTM D2863	%	25
5. UV stabilisation	-	-	-

1) The data contained in this table are typical values and reflect the current state of our knowledge. The data are arithmetic average values which are tested by test specimens made out of rods (ø 40-60 mm). These has to be understood as guidelines, and shall not be used for specification purposes for finished parts. Missing data is completed by data of the raw materials.
2) Data taken from raw material
3) Test results without UL registration
4) Data is only valid for natural colors
5) Physiological harmlessness is generally valid for natural color and is tested at the raw material. Conformities for semi-finished articles are to a certain extend available respectively in the testing phase. Please clarify the latter with us separately.

n.b.= no break + = yes - = no/no data available