

Main features

More transparent glass material (PMMA 95% - 90% glass), with mirror polished surface. In some formulations, it is also transparent to ultraviolet light and infrared lights. Can be used wherever lightness, maximum transparency and easy workability, maintaining high mechanical performance. It has good thermo-stability and has an exceptional resistance to atmospheric agents.

Applications

Carter
Protective doors
Shields
Mechanical details where it's necessary the transparency of the material

Application sectors

Industrial automation
Chemical
Medical and pharmaceutical
Architectural and construction

Compatibilità FDA YES

Colori disponibili



PROPERTIES	REGULATIONS	UM	PMMA
PHYSICAL PROPERTIES			
Density	DIN53479	g/cm ³	1.18
Water absorption (50% at 23° C)	**DIN53495	%	30mg ⁽⁵⁾
Maximum temp. for use in the air for short duration	-	°C	90
Maximum temperature of use in continuous air	-	°C	81
Minimum temperature of use in continuous air	-	°C	-
MECHANICAL PROPERTIES			
Yield stress/tensile strength (σ_s)	*DIN53455 ⁽⁴⁾	N/mm ²	40/110 ⁽⁷⁾
Elongation at break (ϵ_s)	DIN53455	%	-
Breaking load (σ_r)	DIN53455	N/mm ²	-
Elongation at break (ϵ_r)	*DIN53455 ⁽⁴⁾	%	5,5
Impact resistance	*DIN53453	kJ/m ²	-
Impact resistance, notched test	*DIN53453	kJ/m ²	-
Rockwell hardness	DIN53465	Scala M	-
Compression test, load 1% deform. nominal	*DIN53454 ⁽³⁾	N/mm ²	-
Elasticity module	*DIN53457 ⁽⁵⁾	N/mm ²	3300
THERMIC PROPERTIES			
Melting temperature	-	°C	-
VICAT softening temperature	DIN53460	°C	115
Deformation temperature under bending load	DIN53461	°C	-
Coefficient of linear thermal expansion (α)	DIN53752	K ⁻¹ X10 ⁻⁴	0.70 ⁽²⁾
Thermal conductivity at 23°	DIN52612	W/(Kxm)	0.19
ELECTRICAL PROPERTIES			
Volume resistivity	**DIN53482	Ω /cm	>10 ¹⁴
Surface resistivity	**DIN53482	Ω	>10 ¹⁴
Dielectric constant at 10 ³ HZ (on thickness of 1 mm.)	**DIN53483	-	3.6(50HZ)
Dielectric dissipation factor (tan δ) a 10 ³ HZ	**DIN53483	-	0.06(50HZ)
Dielectric strength (on thickness of 1 mm.)	**DIN53481	kV/mm	~30 ⁽⁶⁾
Electrical leakage resistivity	112/030TI	-	-
OTHER PROPERTIES			
Possibility of gluing	-	-	Yes
Absence of physiological risks	FDA	-	-
Dry friction coefficient on steel	DIN53375	-	-
Flammability	UL94	-	HB
UV stability	-	-	-

* : MEASUREMENTS ON TEST TUBES IN ANHYDROUS STATE

** : MEASUREMENTS ON EQUILIBRIUM TUBES
WITH U.R. 50% AT A TEMPERATURE OF 23° C

(3): ON CYLINDERS Ø 12X30 MM

(5): TRACTION SPEED 1 MM / MIN

(4): TRACTION SPEED 5 MM/MIN

(6): TRACTION SPEED 20 MM/MIN