ERIKS

Solutions in Plastics

PMMA Datasheet

Extruded Polymethyl-Methacrylate

General properties

- Excellent transparency with a light transmission of 92%.
- High gloss and colorless.
- High rigidity.
- Good electrical insulation from high electrostatic charges.
- Resistant to weathering conditions.
- High surface hardness.
- Suitable for decorating.
- Real mould ability.
- Good mechanical properties.
- Surface suitable for polishing.
- Resistant to non-polar solvents (oils, aliphatic hydrocarbons).
- Suitable for use in contact with food.

Thermal Stability

- During prolonged exposure to heat, the temperature should not exceed 80/85ºC.

Stress Cracking

- The appearance of cracks in the sheet surface is dependent on the combined action of a chemical agent, temperature, and the level and duration of any stress.

Weathering

- PMMA sheet is highly stable under UV radiation. Even several years of exposure to solar radiation, does not present any substantial variation in its properties.

Applications

- Signs
- Lamps and lighting soffits
- Partitions
- Technical pieces
- Glazing
- Television and PC filters
- Displays and other advertising elements

Material Characteristics

	METHOD	UNITS	VALUE
PHYSICAL			
Density	ISO 1183	$g.cm^{-3}$	1,2
MECHANICAL			
Tensile Strength @ Yield	ISO 527	Mpa	(*)

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	METHOD	UNITS	VALUE
MECHANICAL			
Tensile Strength @ Break	ISO 527	Mpa	83
Elongation @ Break	ISO 527	%	5
Tensile Modulus of Elasticity	ISO 527	Mpa	3200
Flexural Strength	ISO 178	Mpa	120
Charpy Notched Impact Strength	ISO 179	$kJ.m^{-2}$	(*)
Charpy Unnotched	ISO 179	$kJ.m^{-2}$	20
Rockwell Hardness M / R scale			92 / (*)
Ball Indentation	ISO 2039	Mpa	185
OPTICAL			
Light Transmission		%	92
Refractive Index			1,489
THERMAL			
Max. service temperature		ºC	80
Vicat Softening Point - 10N	ISO 306	ºC	116
Vicat Softening Point - 50N	ISO 306	ºC	107
HDT A @ 1.8 Mpa	ISO 75-1,2	ºC	97
HDT B @ 0.45 Mpa	ISO 75-1,2	ºC	101
Coefficient of Linear Thermal Expansion x10-5		$x10^{-5}$. $ºC^{-1}$	7

If you need further information about our sheet, please contact our Technical Department.

*Not available.

CHEMICAL RESISTANCE	BEHAVIOUR		
	GOOD	LIMITED	POOR
Mineral Oil	X		
Vegetable Oil	X		
Acetone			X
Acetic Acid			X
Water	X		
Turpentine		X	
Ammonia		X	
Detergents		X	
Ethanol			X
Petrol	X		
Glycerine	X		
Methanol			X
Toluene			X

FIRE PERFORMANCE		
COUNTRY	**STANDARD**	**CLASSIFICATION**
GERMANY	DIN 4102-1	B2
FRANCE	NPF 92-507	M4