

NUDEC® PMMA Opal

NUDEC®PMMA 385 Opal Diffuser is an extruded acrylic opal white sheet specially developed for backlighting applications with LEDs. It has been created to meet the requirements of today's advertising sign industry and is also suitable for many other lighting applications. This product offers an intense and bright opal white color in daylight and incident light (when combined with LEDs), minimizing LED hot spots thanks to their excellent light diffusion.

Applications

- Backlit panels
- Light boxes and lighting luminaires
- Signage and glowing letters
- P. O. S. displays
- Covers for lights and skylights
- Furniture
- Interior and store design
- Tradeshow booths

Properties

- Optimum light diffusion
- Intense brightness and whiteness
- Excellent weather stability
- It can be bonded, lasered and edge polished

STANDARD SPECIFICATIONS FOR PMMA RESIN

PHYSICAL	TEST	UNIT	VALUE
Density	ISO 1183	g.cm ⁻³	1,19
MECHANICAL			
Tensile strength @breakage	ISO 527	MPa	83
Elongation @breakage	ISO 527	%	5
Tensile modulus of Elasticity	ISO 527	MPa	3.200
Flexural strength	ISO 178	MPa	120
Charpy impact strength unnotched	ISO 179	kJ/m ²	20
Rockwell hardness M/R scale			92/(*)
Ball pressure hardness	ISO 2039	MPa	185

(*) Non-applicable

THERMAL

Maximum service temperature		°C	80
VICAT Softening temperature (10 N)	ISO 306	°C	116
VICAT Softening temperature (50 N)	ISO 306	°C	107
Heat deflection, HDT A (1,8 MPa)	ISO 75-2	°C	97
Heat deflection, HDT B (0,45 MPa)	ISO 75-2	°C	101
Coefficient of thermal expansion	ISO 75-2	x10 ⁻⁶ /°C	7

NUDEC®PMMA 385 Opal SPECIFICATIONS

OPTICAL			
Light transmission	ASTM D-1003	%	30*
Clarity	ASTM D-1003		<5

* In 3 mm thickness

Delivery program

- Color: Ref. 385 Opal
- Size: 3.050 x 2.050 mm
- Thickness: 2, 3, 4 and 5 mm

Further thicknesses and sizes on request.

