EUROPE

PLASKOLITE

OPTIX Cell Cast - LED
CAST Acrylic Sheets:
LED Lighting

OPTIX CELL CAST ACRYLIC SHEETS FOR LED LIGHITNG

LEDs are gaining popularity and are gradually replacing older illumination technologies. Unlike fluorescent or neon tubes, which have an 360° dispersion angle, LEDs have a much narrower angle (from 40°C-140°C for example) and under traditional lighting covers (opals and diffusers) they appear as tiny spots of light. This undesirable phenomenon is referred as “hot spots”.
OPTIX Cell Cast LED sheets feature high light transmission, uniform light diffusion and high “hot spot” hiding power. OPTIX Cell Cast sheets allow sign makers and designers to enjoy the benefits of LEDs and create elegant solutions that are cost effective and eco-efficient while enhancing intensity and colour. The sheets are free of plasticiser, heavy metals, halogens, and fire retardents and can be machines and heat processed like standard acrylic sheets. OPTIX Cell Cast sheets from PLASKOLITE are supplied in two standard white shades. warm and cool, and a wide range of colors; blue, red, green or yellow.

OPTIX Cell Cast-LED
Warm Feel (1695N)

OPTIX Cell Cast-LED
Cold Feel (1693N)

OPTIX Cell Cast-LED
Colors

Other special Acryled products:

MC1710N is the newest development, specially designed for machining and LED inserting.
Light transmission in this product changes with thickness in order to achieve a perfect light diffusion and a clear white light when the thickness is reduced.

QUALITIES

OPTIX Cell Cast sheets feature the same high standard for quality as other OPTIX sheets from PLASKOLITE.

- Beautiful glossy surface
- Matte surface available
- Excellent color stability
- Lightweight - Less than half weight of glass
- Excellent weathering and ageing resistance
- High hardness, stiffness and strength
- Excellent weatherability
- Easily machined and thermoformed by standard techniques
- Cold-curving capability
- Easy glue bonded
- Easily polished and reshaped
- Good chemical resistance to a wide range of substances
- Easy to clean
- Fully recyclable polyethylene protective film
- Environment friendly. Does not contain any toxic materials or heavy metals
- REACH and RoSH declarations available
- Does not produce toxic or corrosive gases upon burning

APPLICATIONS

Interior Design

Architecture

Illuminated signs (LED)

Sign application

Optical Properties of Acryled MC1710N:

Thickness (mm)	Haze ASTM D1003	Clarity ASTM D1003	Light Transmission (%) (LED box Test**)
10	104	0	45-50
15	104	0	40-45
20	104	0	35-45
25	104	0	25-35
30	104	0	25-35

** LED box Test: box size 29x19.5 cm, distance of LED grid to sheet 5 cm, LED grid 11X7, LED type LH-DM-25 12V, measured using a Lux light meter.

TYPICAL PROPERITES

PROPERTIES	Unit	Method	Value
PHYSICAL			
Density	g/cm^3	ISO 1183	1.2
Water Absorption	%	ISO 62 (1)	0.3
Flammability	Class	EN13501	E
MECHANICAL			
Tensile Strength	MPa	ISO 527-2	70
Elongation at Break	%	ISO 527-2	4
Tensile Modulus	MPa	ISO 527-2	3,300
Flexural Strength	MPa	ISO 178	104
Flexural Modulus	MPa	ISO 178	3,000
Rockwell Hardness	M – scale		100
Impact Resistant- Izod notched	kJ/m^2	ISO 180/1A	1.5
Residual Shrinkage (Internal Stress)	%		< 2
THERMAL			
Vicat Softening Point	°C	ISO 306	105 -112
Heat Deflection Temp. under Load 1.8 MPa	°C	ISO 75-1	105
Coefficient of Linear Thermal Expansion	K-1	ISO 11359	6.5×10^{-5}
Recommended Continuous Service Temperature	°C		82
ELECTRICAL			
Surface Resistivity	Ohm	DIN 53458	$>10^{15}$
Volume Resistivity	Ohm.cm	DIN 53458	$>10^{15}$
Dielectric Constant 50 Hz		DIN 53458	3.6
Dissipation Factor 50 Hz		DIN 53458	0.06

Optical Properties of OPTIX CELL CAST LED:

OPTIX Cell Cast LED	Code #	Haze ASTM D1003	Clarity ASTM D1003	Light Transmission (%) (LED box test**)
Cold Feel	1693N	104	2.4	>60
Warm Feel	1695N	104	1.8	>65
White	1845N	104	1.2	>55
Orange	2139N	104	0	>10
Yellow	2471N	104	0	>22
Red	3496N	104	0	>2
Pink	4486N	104	0	>3
Blue	5569N	104	0	>3
Green	6409N	104	2.3	>30

* Optical properties were measured on 3-4 mm sheets.
** LED box Test: box size 29x19.5 cm, distance of LED grid to measured sheet 5 cm, LED grid: 11X7 LED type LH-DM-25 12V, measured using a Lux light meter.

PLASKOLITE

A GLOBAL LEADER IN THE PRODUCTION OF THERMOPLASTIC SHEET

FOUNDED IN 1950

Our Mission: to deliver superior thermoplastic sheet, coatings and polymers to the world, through long-lasting customer relationships and hands-on customer service.

MANUFACTURING LOCATIONS

From our founding, PLASKOLITE strives to treat our employees, our customers, our community and the world, with kindness, dignity and respect. This drives our continuing effort to create sustainable products, in a sustainable manner, for future generations. This on-going commitment is expressed in the

PLASKOLITE Sustainable Ecosystem:

QUICK FACTS

STATUS: Privately held

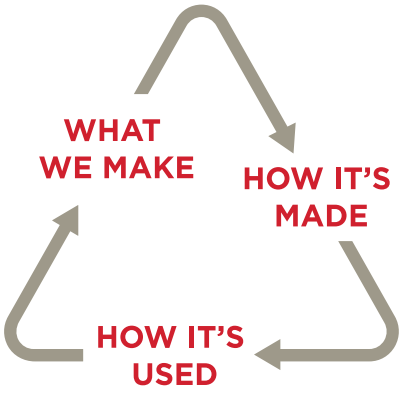
GLOBAL HEADQUARTERS: Columbus, OH

EMPLOYEES: 1900 Worldwide

MARKETS SERVED: Signage, Lighting, Retail Display, Construction, Transportation, Security, Bath & Spa, Industrial, Architecture, Green Houses

OUR PILLARS OF SUSTAINABILITY

EACH CONTRIBUTES TO MAKING THE WORLD A BETTER PLACE



WHAT WE MAKE — Versatile, high-quality, durable thermoplastic materials...not single-use plastics

HOW IT'S MADE — How we make our products reflects our overall philosophy of continuous environmental improvement

HOW IT'S USED — Our thermoplastics play an important role in advancing human well-being, energy conservation and quality of life

PLASKOLITE

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