

PRODUCT INFORMATION

ACRYLITE® Edgelight 8N LD48

Product Profile:

ACRYLITE® Edgelight 8N LD48 Acrylic Molding Compound is a highly transparent light guide material based on ACRYLITE® 8N.

In addition to the typical properties of ACRYLITE®, such as

- Excellent weather resistance
- UV-stability
- Good flow, high mechanical strength

ACRYLITE® Edgelight 8N LD48 is developed for edge lit LED applications. The light scattering properties convert the light guide to a full illuminated panel. Furthermore, the material allows for a completely transparent view through the light guide when it is not illuminated. This opens a new degree of freedom for designers. ACRYLITE® Edgelight 8N LD48 is recommended for panels with a distance of 24 cm to 48 cm (9.45 in to 18.9 in) between two light injecting LED strips.

Application:

Injection molding or extrusion.

Examples:

BLU (Back lighting) for LCD-Displays, illuminated freeform panels, ambient lighting, illuminated handle bars and switches. Illuminated outline contours for devices. Manufacture of moldings without microstructured surfaces and optical structures.

Processing:

ACRYLITE® Edgelight 8N LD48 can be processed on injection molding machines with 3-zone general purpose screws for engineering thermoplastics.

Physical Form / Packaging:

ACRYLITE® Edgelight LD molding compounds are supplied as pellets of uniform size, packaged in 1500 pound gaylords; other packaging on request.

Properties:

	Parameter	Unit	ASTM-Standard	ACRYLITE® Edgelight 8N LD48 Typical Value
Mechanical Properties				
Tensile Strength		psi [MPa]	D 638	11600 [80]
Tensile Modulus		x10 ⁶ psi [GPa]	D 638	0.47 [3.2]
Tensile Elongation @ Yield		%	D 638	4 - 6
Tensile Elongation @ Break		%	D 638	4 - 6
Flexural Strength		psi [MPa]	D 790	18700 [128.9]
Flexural Modulus		x10 ⁶ psi [GPa]	D 790	0.42 [2.9]
Notched Izod	¼" bar @23°C	ft-lb/in [J/m]	D 256	0.36 [19]
Rockwell Hardness		M Scale	D 785	95
Thermal Properties				
Vicat Softening Point	50N, 50°C/h	°F [°C]	D 1525	226[108]
Deflection Temperature, Annealed	1.8MPa, 0.250"	°F [°C]	D 648	212 [100]
Coeff. of Linear Therm. Expansion	32 - 312°F	1/F	D 696	0.00004
Coeff. of Linear Therm. Expansion	0 - 100°C	1/C	D 696	0.000072
Rheological Properties				
Melt Flow Rate	230°C & 3.8 kg	g/10min	D 1238	3.3
Optical Properties				d = 3.2 mm
Light Transmission		%	D 1003	92
Haze		%	D 1003	<2
Yellowness Index			E 313	<1
Other Properties				
Specific Gravity			D 792	1.19
Water Absorption		% Max	D 570	0.3
Mold Shrinkage		in/in, mm/mm	D 955	0.004 - 0.007
Bulk Density		g/cc	D 1895	0.66
Recommended Processing Conditions				
Predrying Temperature		F [°C]		175 [80]
Predrying Time in Desiccant-Type Drier		h		3 – 4
Melt Temperature		F [°C]		465 - 485 [240 - 252]
Mold Temperature (Injection Molding)		F [°C]		100 - 175 [38 - 80]
Die Temperature (Extrusion)		F [°C]		465 - 485 [240 - 252]

All listed technical data are typical values intended for your guidance. They are given without obligation and do not constitute a materials specification.

Certified to ISO 9001:2015, ISO 14001:2015 and IATF 16949:2016.

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The logo for RÖHM, featuring the word "RÖHM" in a bold, black, sans-serif font. The letter "O" is stylized with a small circle above it, resembling a dot or a specific character.