

## PRODUCT INFORMATION

# PLEXIGLAS® Edgelight 8N LD12

### Product Profile:

PLEXIGLAS® Edgelight 8N LD12 is a highly transparent light guide material based on PLEXIGLAS® 8N.

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

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

PLEXIGLAS® Edgelight 8N LD12 is developed for edge lit Edgelight 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. PLEXIGLAS® Edgelight 8N LD12 is recommended for panels with a distance of up to 12 cm between two light injecting Edgelight strips.

### Application:

Preferably, for injection molding, but can also be used for special extrusion.

### Examples:

BLU (Back lighting) for LCD-Displays, illuminated freeform panels, ambient lighting, illuminated handle bars and switches. Illuminated outline contours for devices.

### Processing:

PLEXIGLAS® Edgelight 8N LD12 can be processed on injection molding machines with 3-zone general purpose screws for engineering thermoplastics.

### Physical Form / Packaging:

PLEXIGLAS® Edgelight 8N LD12 is supplied as pellets of uniform size, packaged in 25kg polyethylene bags; other packaging on request.

**Properties:**

|  | Parameter     | Unit      | Standard        | PLEXIGLAS®<br>EdgeLight 8N<br>LD12 |
|--|---------------|-----------|-----------------|------------------------------------|
| <b>Mechanical Properties</b>             |               |           |                 |                                    |
| Tensile Modulus                          | 1 mm/min      | MPa       | ISO 527         | 3300                               |
| Stress @ Break                           | 5 mm/min      | MPa       | ISO 527         | 77                                 |
| Strain @ Break                           | 5 mm/min      | %         | ISO 527         | 5,5                                |
| Charpy Impact Strength                   | 23°C          | kJ/m²     | ISO 179/1eU     | 20                                 |
| <b>Thermal Properties</b>                |               |           |                 |                                    |
| Vicat Softening Temperature              | B / 50        | °C        | ISO 306         | 108                                |
| Glass Transition Temperature             |               | °C        | ISO 11357       | 117                                |
| Temp. of Deflection under Load           | 0.45 MPa      | °C        | ISO 75          | 103                                |
| Temp. of Deflection under Load           | 1.8 MPa       | °C        | ISO 75          | 98                                 |
| Coeff. of Linear Therm. Expansion        | 0 - 50°C      | E-5 /°K   | ISO 11359       | 8                                  |
| Classes of construction product          |               |           | DIN EN 13501-1  | E                                  |
| Flammability UL 94                       | 1.5 mm        | Class     | IEC 60695-11-10 | HB                                 |
| <b>Rheological Properties</b>            |               |           |                 |                                    |
| Melt Volume Rate, MVR                    | 230°C / 3,8kg | cm³/10min | ISO 1133        | 3                                  |
| <b>Optical Properties</b>                |               |           |                 |                                    |
|  | d=3 mm        |           |                 |                                    |
| Luminous transmittance                   | D65           | %         | ISO 13468-2     | 90                                 |
| Haze                                     |               | %         | ASTM D1003      | 5                                  |
| Refractive Index                         | 589nm/23°C    |           | ISO 489         | 1,49                               |
| <b>Other Properties</b>                  |               |           |                 |                                    |
| Density                                  |               | g/cm³     | ISO 1183        | 1.19                               |
| <b>Recommended Processing Conditions</b> |               |           |                 |                                    |
| Predrying Temperature                    |               | °C        |                 | max. 98                            |
| Predrying Time in Desiccant-Type Drier   |               | h         |                 | 2 - 3                              |
| Melt Temperature                         |               | °C        |                 | 220 - 260                          |
| Mold Temperature (Injection Molding)     |               | °C        |                 | 60 - 90                            |

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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® = registered trademark

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The logo for Röhm, featuring the word "RÖHM" in a bold, black, sans-serif font. The letter "R" is significantly larger than the other letters, and the "O" has a small circle above it, resembling a registered trademark symbol.