PLEXIGLAS® Optical 0Z024

Product
PLEXIGLAS® Optical 0Z024 meets extremely high optical requirements. Its high light transmission – especially over long light paths – makes it the ideal acrylic for light guides and edge lighting.

PLEXIGLAS® Optical 0Z024 is a clear, highly transparent solid sheet made of extruded acrylic (polymethyl methacrylate, PMMA). With the appropriate printing, laser-cutting or routing, PLEXIGLAS® Optical ensures that the input light is emitted towards the viewer with almost no losses. Compared with conventional acrylic, PLEXIGLAS® Optical 0Z024 makes it possible to produce energy-saving installations with the same luminance.

Properties
In addition to the well-known, tried and tested properties of PLEXIGLAS®, such as

• excellent light transmission and brilliance
• very high weather resistance
• ease of fabrication
• high surface hardness
• light weight – half the weight of glass
• 11 times the impact strength of glass
• 100% recyclability,

PLEXIGLAS® Optical 0Z024 offers the following special features:

• high luminous efficiency even if large areas are to be illuminated: transmission is ≥ 91% at lengths of 150mm, which is 5% higher than for typical extruded acrylic
• extremely high purity and clarity
• absolute colorlessness

Applications
Owing to these properties, PLEXIGLAS® Optical 0Z024 is particularly suitable for manufacturing large or medium-sized edge-lit light guide panels

• for illuminated signs
• and for display applications.

Fabrication
PLEXIGLAS® Optical 0Z024 can be fabricated just like standard PLEXIGLAS®. The following Guidelines for Workshop Practice are available for working with PLEXIGLAS®:

• Machining PLEXIGLAS® (No. 311-1)
• Forming PLEXIGLAS® (No. 311-2)
• Joining PLEXIGLAS® (No. 311-3)
• Surface Treatment of PLEXIGLAS® (No. 311-4)
• Fabricating Tips for PLEXIGLAS® Solid Sheets (No. 311-5)

Product range
The product is only available on request
info@plexiglas.de
## Properties/Typical Values

<table>
<thead>
<tr>
<th></th>
<th>PLEXIGLAS® Optical 0Z024</th>
<th>Unit</th>
<th>Test standard</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mechanical properties</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>1.19</td>
<td>g/cm³</td>
<td>ISO 1183</td>
</tr>
<tr>
<td>Charpy impact strength</td>
<td>15</td>
<td>kJ/m²</td>
<td>ISO 179/1fu</td>
</tr>
<tr>
<td><strong>Thermal properties</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vicat softening temperature</td>
<td>104</td>
<td>°C</td>
<td>ISO 306</td>
</tr>
<tr>
<td><strong>Optical properties</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transmittance 3 mm thickness</td>
<td>92</td>
<td>%</td>
<td>DIN 5036-3</td>
</tr>
<tr>
<td>Transmittance 150 mm rod</td>
<td>91</td>
<td>%</td>
<td>Manufacturer process</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.49</td>
<td>-</td>
<td>ISO 489</td>
</tr>
<tr>
<td>Haze</td>
<td>&lt; 1</td>
<td>%</td>
<td>ASTM D 1003</td>
</tr>
<tr>
<td><strong>Behavior towards water</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. increase in weight</td>
<td>2.1</td>
<td>%</td>
<td>ISO 62, Method 1</td>
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<tr>
<td>after water storage</td>
<td></td>
<td></td>
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</table>

For further typical values, please see Technical Information PLEXIGLAS® GS/XT (211-1).

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<refeml>PLEXIGLAS®</refeml>

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® = registered trademark
PLEXIGLAS is a registered trademark of Röhm GmbH, Darmstadt, Germany.
Certified to DIN EN ISO 9001 (Quality) and DIN EN ISO 14001 (Environment)

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