



PLEXIGLAS®
BY ARKEMA

Plexiglas® IMPACT Family

ACRYLIC SHEET

Ever wished you could have a Plexiglas® acrylic sheet product that has more impact resistance and toughness compared to standard Plexiglas® MC acrylic sheet? The Plexiglas® IMPACT Family of acrylic sheet products provides this option!

Depending on your application needs, there are four levels of toughness and impact resistance to choose from. Plexiglas® T acrylic sheet contains the lowest level of impact modifier. As the level of impact modifier is increased, Plexiglas® T2 and Plexiglas® T3 are offered all the way up to Plexiglas® DR acrylic sheet, which has the highest level of impact modifier throughout the sheet.

The Plexiglas® IMPACT Family of products combines the beauty of Plexiglas® MC with added toughness. You no longer have to sacrifice clarity, design flexibility, or fabrication techniques to get the performance you desire.

- **Improved Toughness**
- **Increased Chemical Resistance**
- **High Optical Clarity**
- **Proven Weatherability**
- **Can be easily fabricated and thermoformed**
- **Thickness range from 0.080" – 0.236"**
- **Colors available upon request**

SHEET SIZE

48" x 96"

60" x 96"

72" x 96"

Custom sizes available
upon request

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ACRYLIC SHEET

TYPICAL STANDARD PROPERTIES

| PROPERTIES | TEST METHOD | UNIT | Plexiglas® T Acrylic Sheet | Plexiglas® T2 Acrylic Sheet | Plexiglas® T3 Acrylic Sheet | Plexiglas® DR Acrylic Sheet |
|---|---------------|---------------------------------|-----------------------------------|--|--|--|
| PHYSICAL | | | | | | |
| Nominal Thickness for data unless otherwise noted | | in | 0.177" | 0.177" | 0.177" | 0.177" |
| Specific Gravity | ASTM D-792 | N/A | 1.177 | 1.174 | 1.166 | 1.160 |
| Rockwell Hardness | ASTM D-785 | M scale | 84 | 78 | 57 | 39 |
| OPTICAL | | | | | | |
| Luminous Transmittance ¹ | ASTM D-1003 | % | 92.0 | 91.0 | 91.0 | 90.0 |
| Haze ¹ | ASTM D-1003 | % | < 1.5 | < 2.0 | < 2.0 | < 2.5 |
| MECHANICAL | | | | | | |
| Tensile Strength, Maximum | ASTM D-638 | psi | 7600 | 6800 | 5900 | 5400 |
| Tensile Strength, Yield | ASTM D-638 | psi | 8600 | 7900 | 6500 | 5600 |
| Tensile Elongation, Yield | ASTM D-638 | % | 4.8 | 5.0 | 5.9 | 7.6 |
| Tensile Modulus of Elasticity | ASTM D-638 | psi | 405,000 | 365,000 | 300,000 | 250,000 |
| Flexural Strength, Maximum | ASTM D-790 | psi | 14,300 | 13,000 | 11,000 | 9300 |
| Flexural Modulus of Elasticity | ASTM D-790 | psi | 400,000 | 360,000 | 310,000 | 260,000 |
| Notched Izod Impact @ 73°F (23°C) | ASTM D-256 | ft-lb / in | 0.67 | 0.96 | 1.23 | 1.37 |
| Un-notched Charpy @ 73°F (23°C) | ASTM D-6110 | ft-lb / in | 14.2 | 20.4 | 25.0 | 29.5 |
| THERMAL | | | | | | |
| Deflection Temperature under Flexural Load @ 264psi – unannealed ¹ | ASTM D-648 | °F | 184 | 182 | 174 | 167 |
| Deflection Temperature under Flexural Load @ 264psi – annealed ³ | ASTM D-648 | °F | 210 | 207 | 202 | 198 |
| Coefficient of Linear Thermal Expansion at 86°F | ASTM D-696 | in / in / °F x 10 ⁻⁵ | 4.06 | 4.09 | 4.91 | 5.31 |
| Maximum Recommended Continuous Service Temperature | N/A | °F | 155 - 175 | 150 - 170 | 145 - 165 | 135 - 155 |
| Recommended Thermoforming Temperature | N/A | °F | 270 - 335 | 265 - 330 | 255 - 320 | 250 - 315 |
| CRAZE RESISTANCE⁴ | | | | | | |
| Constant Stress Craze Resistance, IPA | MIL-PRF-8184F | psi | 1750 | 1800 | 1850 | 2600 |
| Constant Stress Craze Resistance, Acetone | MIL-PRF-8184F | psi | 600 | 650 | 700 | 1050 |
| FLAMMABILITY² & BUILDING CODE COMPLIANCE | | | | | | |
| Horizontal Burn Rate ¹ | ASTM D-635 | in / min | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Smoke Density | ASTM D-2843 | % | 2.1 | 3.0 | 5.7 | 10.5 |
| Self Ignition Temperature | ASTM D-1929 | °F | 811 | 799 | 829 | 808 |
| Plastics Component – QMFZ2.E39437 Flammability Classification | UL 94 | N/A | 94HB (≥ 0.060" clear, white ONLY) | 94HB (≥ 0.060" clear, white ONLY) | 94HB (≥ 0.060" clear, white ONLY) | 94HB (≥ 0.060") |
| Plastics Component – QMFZ2.E39437 Outdoor Suitability | UL 746C | N/A | — | f1 (≥ 0.060" clear) f2 (≥ 0.060" ALL) | f1 (≥ 0.060" clear) f2 (≥ 0.060" White) | f1 (≥ 0.060" clear) f2 (≥ 0.060" White) |
| International Building Code | IBC 2606.4 | N/A | — | CC2 (0.098"-0.354") | — | CC2 (0.080"-0.354") |

Data given are average values and should not be used for specification purposes.

1. This property will change with thickness. The value given is for the thickness indicated in the column heading unless otherwise noted.

2. Flammability tests are small scale tests and may not be indicative of how materials will perform in an actual situation.

3. Annealing Cycle: 16 hrs @ 80°C

4. Conditioned for 2 hours at 200°F and then room temperature for 48 hours

Distributed by:



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www.piedmontplastics.com

Plexiglas® acrylic plastic is a combustible thermoplastic. Observe fire precautions appropriate for comparable forms of wood and paper. For building uses, check code approvals. Impact resistance is a factor of thickness. Avoid exposure to heat or aromatic solvents. Clean with soap and water. Avoid abrasives.

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See MSDS for Health & Safety Considerations.

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