



PLEXIGLAS®

BY ARKEMA

Plexiglas® P55

CELL CAST ACRYLIC SHEET

PLEXIGLAS® P55 CELL CAST ACRYLIC SHEET (COLORLESS)

| Thickness | Sheet Size |
|-----------|---------------|
| 0.125" | Made to Order |
| 0.250" | Made to Order |
| 0.500" | Made to Order |
| 0.750" | Made to Order |
| 1.000" | Made to Order |
| 1.250" | Made to Order |
| 1.500" | Made to Order |
| 1.750" | Made to Order |
| 2.000" | Made to Order |

Plexiglas® P55 cell cast acrylic sheet is a made to order item. Please check with your local sales person for sheet size options, availability and production schedules. Additional thicknesses can be quoted upon request.

Plexiglas® P55 cell cast acrylic sheet is produced by Altuglas International. It is manufactured to meet the requirements of MIL-PRF-8184F, Type I and II, Class 1. Typical markets include general aviation and military aircraft. Applications include aircraft canopies, instrument panels, and lens covers. It is available in thicknesses ranging from 0.125" to 2.000".

- A Premium grade, cross-linked cell-cast acrylic sheet suitable for stretching for Mil-Spec applications
- Can be used alone or as a laminate
- Lightweight – Half the weight of glass
- Weather resistant
- Excellent light transmission and optical clarity
- Easily fabricated and thermoformed



Typical Standard Properties

| PROPERTIES | TEST METHOD | UNITS | VALUE |
|--|---------------|------------|---------|
| Physical | | | |
| Nominal Thickness for data unless otherwise noted | N/A | in | 0.500" |
| Specific Gravity | ASTM D-792 | N/A | 1.19 |
| Water Absorption (24 hours) ² | ASTM D-570 | % | < 0.20 |
| Optical | | | |
| Refractive index @ 72°F | ASTM D-542 | N/A | 1.49 |
| Luminous Transmittance ¹ | ASTM D-1003 | % | 92.5 |
| Luminous Transmittance – After 1000 hrs accelerated weathering ¹ | ASTM D-1003 | % | 92.5 |
| Haze – Initial ¹ | ASTM D-1003 | % | < 2.0 |
| Haze – After 1000 hrs accelerated weathering ¹ | ASTM D-1003 | % | < 3.0 |
| UV Transmission (290-330 nm) ¹ | MIL-PRF-8184F | % | < 0.5 |
| Angular Deviation (Primary) | ASTM F-733 | Minutes | 3 |
| Effect of Accelerated Weathering on Appearance (crazing, discoloration, warping) | ASTM D-1449 | Visual | None |
| Mechanical | | | |
| Tensile Strength, yield | ASTM D-638 | psi | 11,600 |
| Tensile Elongation, break | ASTM D-638 | % | 3.5 |
| Residual Shrinkage (Internal Strain) | ASTM D-4802 | % | < 1.0 |
| Thermal | | | |
| Deflection Temperature Under Flexural Load @ 264 psi | ASTM D-638 | °F | 229 |
| Coefficient of Linear Thermal Expansion | ASTM E-831 | in / in °C | 0.00006 |
| Maximum Recommended Continuous Service Temperature | N/A | °F | 180 |
| Recommended Thermoforming Temperature | N/A | °F | 290-360 |
| Craze Resistance | | | |
| Dry Substrate: Isopropyl Alcohol | MIL-PRF-8184F | psi | 2800 |
| Dry Substrate: Toluene : Isobutyl Acetate (1:2) | MIL-PRF-8184F | psi | 2800 |
| Wet Substrate: Isopropyl Alcohol | MIL-PRF-8184F | psi | 1800 |
| Wet Substrate: Toluene : Isobutyl Acetate (1:2) | MIL-PRF-8184F | psi | 1800 |
| Flammability³ & Specification Compliance | | | |
| Horizontal Burn Rate | ASTM D-635 | in / min | 0.50 |
| Military Performance Specification | MIL-PRF-8184F | --- | PASS |

- Data given are typical average values and should not be used for specification purposes
- All samples conditioned for at least 40 hours at 23°C +/- 2°C and 50% RH +/- 10%

1. This property will change with thickness. The value given is for the thickness indicated in the column heading unless otherwise noted.
2. Water absorption samples conditioned for 1 hour at 110°C.
3. Flammability tests are small scale tests and may not be indicative of how materials will perform in an actual situation.

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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