

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



PRODUCT OFFERINGS*

Sheet Size
48" x 96"
60" x 96"
72" x 96"

* Custom sizes available upon request

HOW TO PURCHASE

PLEXIGLAS® IMPACT Family can be purchased through authorized distributors throughout the Americas.

For product inquiries, technical questions, or contact information for your closest distributor, please contact our customer service team at: Usph-sheet-cs@trinseo.com or 1-800-523-7500

TECHNICAL DATA SHEET

TYPICAL VALUES

Test Method	Unit	PLEXIGLAS® T Acrylic Sheet	PLEXIGLAS® T2 Acrylic Sheet	PLEXIGLAS® T3 Acrylic Sheet	PLEXIGLAS® DR Acrylic Sheet	
Physical properties						
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 properties						
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 properties						
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 properties						
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/°Fx10 ⁻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 Resistance ⁴						
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
Flammability ² & specification 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")	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.

¹This 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.

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