

Applications

- Glazing, skylights
- Aquariums
- Lenses and lighting fixtures
- Housings
- Signage
- Point of purchase displays

Advantages

- Excellent impact resistance
- Good machinability
- Excellent aesthetic qualities
- Optically clear
- Good strength and stiffness
- Low cost
- Lightweight: half the weight of glass and 43% the weight of aluminum
- Weather resistant
- Greater safety than annealed glass

Grades

- Cell Cast
- Continuous Cast
- Extruded

NOTE: Several grades of this material are available. For additional information regarding this plastic, contact your Emco Industrial Plastics representative or call (800) 292-9906.

Acrylic Extruded Acrylic [Polymethyl Methacrylate, Extruded]

Acrylic is an optically transparent thermoplastic material unaffected by moisture and offers a high strength-to-weight ratio. An economical, general purpose material. acrylic can be easily heat-formed without loss of optical clarity. Acrylic is used in a wide variety of applications because it can be easily cemented, welded, thermoformed and machined, making it an extremely versatile material suitable for a wide range of applications. Compared to all other types of transparent thermoplastics, acrylic has outstanding resistance to the damaging effects of sunlight and outdoor weathering. Most commercial acrylics have been UV stabilized for good weatherability and resistance to prolonged sunlight exposure. It has FDA approval.

Extruded acrylic provide the most uniformity in thickness, and are also the most economical. Production advancements has made possible materials of up to one inch in thickness without noticeable die lines which in the past have been a barrier for this material. The down side is that they are also the softest in the acrylic family. Extruded sheet acrylic is offered in a growing number of colors, finishes and thicknesses which should satisfying most acrylic applications.

Brand Names

Acri-Pane, Acri-Tuf, Acrylic DR, Acrylic SDP, Acrylite® FF, Acrylloy™, Acrypane, Acry-Pact, Deglas®, Deglas® SDP, Ex-Cel AES, Excelon ACR, Extru-Lite, Flex-O-Crylic®, Flex-o-Graze, Gardglas™, Homalite™, Lucite® , Lucite® CP, Lucite® MYST, Lucite® TUF, Optix® FG, Optix® Frost, Perma Glaze, Perspex™, Perspex™ CP, Perspex™ FG, Perspex™ Frost, Perspex™ Pearlescent, Plexiglas® MC, Plexiglas® Q, Plexiglas® SG, Plexiglas® SG PLUS, Plexiglas® T, Rotuba-Glaz, Safe-T-Vue, Solatuf™, Suncrylic®, Tecacryl™, Temper Elite, Thermoclear-ACR, DP-30, DP-32, Lumasite®, Fluoromir, Mirroplast™, Reflections™, Replex, Exalon

Emco Industrial Plastics doesn't claim to represent all of the manufacturers or trade name products listed. This list is intended as a guide of typical materials available for purchase from Emco Industrial Plastics, Inc. For additional information, contact an Emco Industrial Plastics representative at (800) 292-9906.

Availability

TYPE	SIZE	LENGTH	COLOR
Sheet	1/16" - 1" TH		Clear, Colors
Rod	1/16" - 3" DIA (round, square, hex)		Clear, Colors
Tube	1/4" - 6" OD		Clear
Other	Shapes		

Give us your cut-to-size dimensions. We will precision-cut these plastics to your exact size. Additional sizes and colors available upon request.

Properties

PHYSICAL PROPERTIES	UNITS	ASTM	RESULTS
Density	lb/in ³	D792	0.043
Water Absorption. 24 hrs	%	D570	0.3
MECHANICAL PROPERTIES	UNITS	ASTM	RESULTS
Tensile Strength @yield	psi	D638	8.000 - 11.000
Tensile Modulus	psi	D638	350.000 - 500.000
Tensile Elongation @Break	%	D638	2
Flexural Strength	psi	D790	12.000 - 17.000
Flexural Modulus	psi	400000	350.000 - 500.000
Compressive Strength	psi	D695	11.000 - 19.000
Hardness. Rockwell R		D785	M80 - M100
IZOD Impact Strength Notched	ft-lb/in	D256	0.3
THERMAL PROPERTIES	UNITS	ASTM	RESULTS
Coefficient of Linear Thermal Expansion	(x 10 ⁻⁵ in./in./°F)	D256	5 - 9
Heat Deflection Temp at 264 psi	°F		150 - 65
Melting Temperature	°F	D3418	265 - 130
Max Operating Temp	°F		150 - 65
Thermal Conductivity	BTU-in/ft ² -hr-°F	C177	3.9
ELECTRICAL PROPERTIES	UNITS	ASTM	RESULTS
Dielectric Strength	V/mil	D149	400
Dielectric Constant		D150	4
Dissipation Factor @ 60 Hz		D150	0.05
OPTICAL PROPERTIES	UNITS	ASTM	RESULTS
3mm Transparent Clear Transmittance. Total (%)	%	D1003	92

Refractive Index

%

D542

1.48 - 1.50

NOTE: The property values presented above are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets. All values at 73°F (23°C) unless otherwise noted.