

3/16" in length. Therefore, for outdoor glazing, all sheets should be cut almost 1/16" per running foot shorter than the frame size. Keep in mind that sash rabbets must be deep enough to hold the sheet when it contracts during cold weather.

Breakage Resistance

Acrylic is a tough, resilient plastic. When properly fabricated and installed, it has from 6 to 17 times greater resistance to breakage than glass in thicknesses from 1/8" to 1/4". It can be twisted and will withstand shock and vibration.

However, chipped edges caused by sawing with a coarse or dull blade will make the sheet crack-sensitive under impact. These nicks should be filed down to a chamfered edge. This characteristic of chipped edges applies also to improperly drilled holes which show small cracks around the edge.

Heat Resistance

Acrylic sheets can be used at temperatures from -30° F. up to +200° F., depending on the application. It is recommended that temperatures not exceed 180° F. for continuous service, or 200° F. for short intermittent use. Acrylic should not be exposed to high heat sources such as high wattage incandescent lamps.

Weather Resistance

Acrylic is virtually unaffected by blazing sun, extreme cold, salt water spray, etc. It will not shrink or deteriorate after long years of service. Clear Acrylic will never turn yellow.

Electrical Properties

Acrylic has many desirable electrical properties. It is a good insulator. Its surface resistivity is higher than that of most plastics. Continuous outdoor exposure has little effect on its electrical properties.

Chemical Resistance

Acrylic sheet has excellent resistance to many chemicals including:

- solutions of inorganic alkalis such as ammonia;
- dilute acids such as sulfuric acid;
- aliphatic hydrocarbons such as hexane and VM&P naphtha.

Acrylic is not attacked by most foods, and foods are not affected by it.

It is attacked, in varying degrees, by

- aromatic solvents such as benzene and toluene;
- chlorinated hydrocarbons such as methylene
- chloride and carbon tetrachloride;
- ethyl and methyl alcohols;
- some organic acids such as acetic acid;
- lacquer thinners, esters, ketones and ethers.

Light Transmission

Clear, colorless Acrylic sheet has light transmittance of 92%. It is clearer than glass and will not turn yellow.

Translucent white Acrylic has excellent light-diffusing properties and is the preferred plastic for all types of lighting fixtures and signs. It can be obtained in seven densities ranging in light transmittance from 11% to 67%.

Acrylic is also available in transparent and translucent colors.

Light Weight

Acrylic sheet is less than 50% as heavy as glass, and 43% as heavy as aluminum. One square foot of 1/8" thick Acrylic sheet weighs approximately 3/4 lb.

CUTTING ACRYLIC SHEET

Health and Safety Precautions

Cutting Acrylic sheet may cause localized heating, resulting in the release of methyl methacrylate (MMA) monomer vapor, and may also generate some polymer dust. See Concentration Levels and Ventilation Standards, at left. Any dust produced by the cutting of Acrylic sheet is considered