



Facts About Acrylic

Density

Acrylic is less dense than standard glass, meaning it is cheaper to produce, it weighs less, it is easier to move around, and it costs less to transport. Acrylic is only half as dense as glass and has a greater ability to bend. Its flexibility allows acrylic to distort its shape without harm, making it resistant to impact: A sudden blunt pressure does not break acrylic, whereas it would shatter glass in an instant. Cutting acrylic is easier than cutting glass, too; you can either score it or break it, the same techniques used for cutting glass, or by using a suitable hacksaw or power saw. Also, a soldering iron can melt through acrylic quite efficiently.

Strength

Acrylic is 17 times stronger than glass, requiring greater force to break it. This gives acrylic an obvious edge in situations where damage to a window due to impact could cause a fatal loss, such as on in a submersible vehicle like a boat or submarine. Acrylic's impact strength is higher than glass, so it cracks instead of shattering. In the automobile industry, where controlled shattering is desired for safety glass, tempering is required before standard glass will shatter in any sort of predictable manner.

Surface and Applications

The surface of acrylic is softer than that of glass, which is why it is not scratch resistant--although scratches and blemishes in acrylic buff away easier. The same scratches on mineral glass would require replacement of the entire pane. Another advantage of acrylic is that you can bond several panes together, joining the seams to create one piece--you could create a solid container of acrylic, for instance. It's an ideal application for a fish tank.



Facts About Acrylic Continued

Transparency

Acrylic is as clear as optical glass but it allows more light while also filtering ultraviolet. Glass allows 80 percent to 90 percent of visible light to pass while acrylic transmits 92 percent. And acrylic does not yellow with age or appear milky, as thicker panes of glass can.

Insulation

When it comes to insulation, acrylic is seven times more efficient than glass in reducing temperature flux, which means cool or warm air outside penetrates less easily than it would through standard glass. That can save you money on your heating bill.

NOTE: UV Rays Are Damaging

Magnetite carries a UV Inhibiting Acrylic, so it blocks 99.9% of all harmful UV rays.

Have a specific question that needs answered or just want to learn more?
Visit us online: www.magnetite.com