

How Acrylic Is Advantageous

Numerous advantages are offered by acrylic for various applications such as exceptional optical clarity, high impact resistance, rigidity and outstanding weather ability. Having proper knowledge of acrylic's characteristics and proper molding techniques can help molders become more efficient and profitable. Here are some of the frequently asked questions regarding acrylic. First of all everyone wants to know that what are the advantages of acrylic-based compounds over other plastics? Everyone is curious to know about the benefits of acrylic? As we all know acrylic is inherently more light-stable and scratch-resistant than other plastic materials. Most of plastics require stabilizers or surface coatings to match the weather ability and scratch resistance of acrylic. Whereas acrylic is primarily used in applications that take advantage of its superior clarity, scratch resistance and UV stability characteristics. Also acrylic is also more transparent than glass, lighter in weight, and is used in many applications where glass has been traditionally used. Exceptional weather ability of acrylic also makes it ideal for most outdoor applications where transparent materials are required.

The newly invented plastic, acrylic is very rigid, providing stability in design. The most outstanding feature of acrylic materials is their optical clarity. It has capability of transmitting more light than any other material. Thus making it an excellent choice for lenses and other applications where optical quality is required. Another question which comes in mind is how does acrylic meet the challenges of manufacturing thin-walled parts, for example with DVD replication? The answer to this question is that as acrylic materials are available in a wide range of flow grades, some of which are better suited to thin-wall molding than others. Acrylic plastics that are best suited for thin wall applications have a high melt flow rate and good thermal stability. An example of this in practical use is with DVD replication. DVD replication requires that the acrylic be molded into a point six millimeters thick by twelve centimeters diameter disc in a five point six second cycle time without degrading the material. Also producing a high-quality optical part with exceptional surface replication to allow reproduction of the digital information on the stamper is required. Acrylics have capability of working well and have been used successfully in gas-assisted molding operations. Such operations are used to minimize part weight by blowing a gas bubble inside a part. The process is most often used for opaque materials where the bubble cannot be seen, so we see this more often with opaque acrylic alloys than with standard transparent acrylics. Acrylic plastic can also be used with foaming agents to reduce part weight. But because of the transparent nature of acrylic, this is not very common.

About the Author

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