



MAGMA ACRYLICS (Pty) Ltd

Exclusively developed acrylic adhesive products

WORKING WITH PLEXIGLAS/ ACRYLIC MATERIAL

General aspects to consider when working with Plexiglas Acrylic

How do you cut Plexiglas Acrylic...?

When using acrylic for the first time DIY or a potential long term project it's common place for consumers to cut their own plexiglas sheets at home or in a factory. A standard sheet of plexiglas acrylic is bought in set sheet sizes, so initially this will probably be oversize, or the exact correct size wasn't available when purchasing. There are a lot of reasons to cut acrylic, but there are special considerations to be made before cutting!

It's important to take the time to understand your options for cutting plexiglas acrylic to ensure that the process goes smoothly the first time. For example, if you are trying to glue acrylic together, it's important to ensure all edges are cut perfectly straight. There's also the potential of damaging the acrylic if it's cut incorrectly, if an error is made when cutting an acrylic sheet it's a long, taxing expensive process to correct the mistake if actually possible!

Throughout this process, keep in mind that safety should always come first. Many acrylic cutting methods require safety wear protection and dirty air extraction as it's always recommended to work with the acrylic in a well ventilated area to avoid breathing in harmful vapours.

What's the easiest way to cut Plexiglas Acrylic...?

While the recommended way to cut acrylic is with a high quality table saw, the simplest and most beginner friendly way to cut plexiglas is by using a sharp scoring tool. However, keep in mind that you should only use this method on acrylic sheets that are a maximum of 6mm thick.

First, mark the area you plan to cut with a permanent marker pen, or just use a ruler as a guide. Make sure this line is completely straight before you make your first scoring line. For best results, use acrylic that's paper masked or covered in a protective film, this will prevent any unintended chips or cuts in the acrylic.

Next, place the blade at the topmost portion of the acrylic, apply a moderate amount of pressure, and pull the blade towards you to create a deep scoring mark. Ideally the scoring marks in the acrylic should be at least 1mm deep, which usually requires a few passes. At this point it's optional to flip the acrylic around and reinforce the scoring marks you made on the other side of the acrylic.

Now, clamp your scored plexiglas acrylic sheet securely to a table, with the scored area on the edge of the table; if you don't have clamps use one hand to secure the sheet. Now, apply swift, even pressure to the edge of the sheet, if you've scored the material deeply enough the acrylic will break cleanly in half. If the edges are too rough for your liking, try using a sanding block or fine sandpaper to smooth the edge of the acrylic. At this point you will have a freshly cut sheet of acrylic.

FYI -You won't need ear protection for this method, but be aware that running the blade along the plastic will create an uncomfortable sound. Eye protection isn't critical here either, but it's advisable since you will be cutting with a sharp blade and small pieces of plastic could be launched upward when splitting the acrylic.

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How to cut thick Plexiglas Acrylic...

To cut thicker sheets of acrylic, it's best to use either a Jigsaw or a table saw that's outfitted with a special blade designed specifically for cutting acrylic. This process will allow you to cut cleanly the first time, and will make the finishing process much more straightforward. If these blades aren't available, a regular blade with a high tooth count will do the job, however it may cause jagged cuts or even develop cracks in the material.

Attention! When cutting acrylic using any power tool, it is essential that you use both eye and ear protection. Also ensure that you're properly trained on how to use these tools to minimize the chance of injury!

Cutting Plexiglas Acrylic with a Table Saw...

Table saws are the most common method for cutting thick sheets of plexiglas acrylic. If the operator of the table saw has cut wood or any other material in the past, the cutting process will be rather straightforward. The best blade to use is a 250mm acrylic cutting saw blade, or if you're using a hand held circular saw use a 185mm cutting saw blade.

First, mark the area or use a straight edge where you'd like to cut the plexiglas, this will help guide your saw in a straight line. Then use masking tape and apply it along the sides of the lines to provide additional protection against cracks and chips when the cutting process begins. Before you cut, use foam insulation to reduce vibrations in the acrylic sheet which could cause cracks or rough edges.

Then cut the acrylic in a straight line at a steady, moderate pace. This is the best option, not only for your personal safety, but also to prevent rough edges. Be careful not to cut too slowly or at an angle as this will generate heat in the acrylic and potentially cause stress cracks and chips. If possible use a guide to ensure that the line is perfectly straight. Note cutting freehand will increase your chances of error!

Cutting Plexiglas Acrylic with a Jigsaw...

Jigsaws can cut thick sheets of plastic, but they're primarily used to cut curves into plexiglas for applications like circular plexiglas windows. Be sure to use a fine toothed blade, and preferably one that is designed to cut Plexiglas acrylic.

Like the previously mentioned methods, first use a marker to draw the desired design onto the plexiglas. Try to make sure that either side of the Plexiglas acrylic is totally secured to the table – ideally using clamps, but thick wood or another heavy object will do the trick if needed. This is to reduce the chances of the plexiglas vibrating that can cause imperfections and potential injury as the material can unexpectedly move violently.

Next, position the jigsaw in the topmost area of the acrylic sheet, but take care to ensure you can comfortably reach the jigsaw. Then pull the jigsaw towards your body, following the guidelines you marked earlier. If you get stuck at an odd angle, pull the jigsaw back out the way it came, and reorient the Plexiglas acrylic sheet. Then, resume cutting from a new angle.

Using a Professional to Cut-to-Size Plexiglas Acrylic...

Cutting acrylic isn't always the most easiest and straightforward of processes. There are a number of factors to consider when choosing the right method, and there's always a potential for expensive errors that could ruin the acrylic – or potentially cause serious injury. For this reason some users might choose to purchase plexiglas that is already cut-to-size and professionally finished to a high degree of accuracy.