
Cutting

General Recommendations:

When cutting Sorea Acrylic products cover work area with soft, clean cloth to prevent scratching. Use sharp, clean blades, and make sure the sheet is securely fastened to avoid chattering and chipping.. Bring the blade to full speed before starting the cutting and use compressed air to cool the blade and remove chips. Wear proper safety equipment including safety glasses, gloves and protective clothing as required by local regulations.

Most saws commonly used for wood or metal should satisfactorily cut sheets made by Sorea LLC. These include circular saws, band saws, saber saws, jigsaws, hacksaws, or handsaws. However, circular saws and band saws usually produce smoother, cleaner, faster cuts. Routing is also a common technique.

For the highest quality cut, use a triple-chip style carbide-tipped blade commonly used for plastics. Otherwise, chipping and irregular cuts may result. Use a slow and consistent feed speed.

Circular Saws:

- Number of teeth – 2 to 4 teeth per 25mm (per. In.).
- Blade thickness – 2.5mm (3/32 in.) for single sheets in thickness of 1 to 10mm (0.040 to 0.375 in.); 3mm (1/8 in.) blade should be used for cutting thicker sheets.
- Blade tooth rake angle – 5 to 10 degrees.
- Depth of cut – For best results, allow the blade to protrude through the piece by more than 3mm (1/8 in.) this will minimize the chance of creating a chipped edge.
- For circular saws, the following blade speeds are recommended

Blade Diameters, mm (in.)	Blade Speed, rpm
100 (3.5 – 4)	10,000
180 (7.25)	5,000
200 (8)	4,300
250 (10)	3,400
300 (12)	2,900
350 (14)	2,500

Routers

Router with sharp, two fluted, straight cutters produce very smooth edges. Also spiral-cut router bits have been found to work successfully depending on the application. It is especially useful for trimming the edges of flat or formed parts, or parts too large or irregular in shape to cut with a band saw. Portable, overarm, and small table routers work equally well.

Use router speeds of 16,000 to 25,000 rpm to produce good clean edges

Feed the sheet into the router slowly to avoid excess frictional heating, shattering, or chipping.

Use a suitable jig to support the sheet during routing.

Use compressed air to cool the bit and to aid in chip removal.