



Technical data and general information

Cutting

Method: Basic

1. MARKING GAUGE

This is mainly used for score snapping thin materials up to 5mm. When cutting a panel, use a suitable ruler or straight edge and score the line two or three times. The groove must be uniform in depth across the panel and be approximately 25% of the panels thickness. Position the panel so the groove faces upward and fold or snap the panel over a suitable piece of wood which follows the score line. This method is only used over short lengths of material. (Not recommended for Akril panel if edge is critical)

2. CIRCULAR SAW

Cutting work using a circular saw may be achieved using a running saw, sliding bed panel, up-down lathe or the like. The circular saw requires a blade with super hard alloy teeth and no offset. You can obtain a plastic cutting blade or any blade with no offset such as those used for cutting aluminium would be acceptable. When bracing the Akril panel for fabrication ensure you take care to protect the surfaces whilst cutting.

3. CNC ROUTER

This is a specialist method of fabrication. It is used for intricate part fabrication, shapes and exact cutting specifications. If you do not have a CNC router machine you will have to seek out an industry professional to supply this method.

Blade requirements

Blade Outer diameter	255~305mm
Number of Teeth	80 ~ 100
Tooth Thickness	3.0 ~ 3.5mm
Angle of Relief	15 ~ 20
Hook Angle	15 ~ 20
Angle of Setting Band	2 ~ 3
Revolution	3000 ~ 5000 rpm
Feeding Speed	3 ~ 6mm /min

Other methods

Jig saws and band saws are acceptable for cutting Akril panels. Use blades suited for Plastic or Aluminium.

Surface restoration

Sanding

Depending on the severity of the scratch, a fine surface abrasion or scratch may simply polish out where a deep etched scratch will require a more involved process:

1. If necessary, start with 120-220 grit sandpaper, used dry.
2. Smooth with a 400 grit wet/dry paper, used wet.
Grits as fine as 600 may be used.
3. Finish with 800 Grit wet and dry used wet, you may want to go as fine as 1200grit.
4. To obtain a gloss finish use a polishing compound that can polish plastic, silver or brass; wash of excess residue with warm water.
5. Always use a wooden or rubber sanding block.
When removing scratches be sure to sand an area slightly larger than the scratch. Sand with a circular motion, and use a light touch and plenty of water with wet/dry papers try not to over sand. Remember to rinse the sanding residue off between the paper grades.

Notes on finishing

Final polishing will give Akril panels a high lustre. Power-driven buffing tools are recommended without exception. Buffing wheels are available as attachments for electric drills. A good buffing wheel for Akril consists of layers of 5 mm carbonised felt, layers of unbleached muslin laid together to form a wheel or woollen wheels. Solidly stitched wheels should be avoided. The wheel should reach a surface speed of at least 400 metres per minute. Speeds of up to 1200 metres per minute are useful for Akril panel.

Akril panel should be polished using a commercial buffing compound of the type used for silver or brass, or you can use a non- silicone car polish that has no cleaning solvents in it. First, however, tallow should be applied to the wheel as a base for the buffing compound. Just touch the tallow stick to the spinning wheel, and then quickly apply the buffing compound. To polish, move the piece back and forth across the buffing wheel. Be careful not to apply too much pressure. Keep the wheel constantly moving to prevent heat build-up? Never begin polishing at the edge of the sheet. The wheel could easily catch the top edge and throw the piece across the room or at you.

Drilling and adhesives

Drilling

A Drill Press or Electrical Drill may be used. A standard metal or wood drill will cut into the Akрил panel very quickly and may cause damage through cracking or splitting. You will need to modify the tooth edge of the drill bit by grinding the tip angle to increase its size (flatten) so that the material is scraped away rather than cut, a commercially available plastic drill bit or a blunt drill bit may be acceptable.

1. When drilling Akрил panel using a Drill press the revolving speed is INCREASED if the hole diameter is small (0-4mm).
2. If the hole is large in diameter DECREASE the speed. A hole saw may be used to further enlarge the opening; make sure it is a metal type of hole saw with no offset.
3. You can also use a plunging type router to produce a hole in Akрил panel; employ the same principles as electric drilling methods.

Tips for Drilling

- Firmly secure material before drilling.
- Be extremely cautious with thinner materials as damage can easily occur, for large holes remember to reduce drilling speed.
- To assist in avoiding cracking place a sheet of timber or plastic of 5-10mm underneath the cutting area and allow the tool to continue into this support.

If you are having your panel fabricated by CNC Router the machine will be able to produce the holes for you as long as you supply the centres and locations.

Adhesives

When installing Akрил Panel ensure the usage of a high quality neutral cure glass and glazing silicone, inferior products may affect the specialised coating if incorrectly used. A product such as Rhodoric V60 neutral cure silicone would be the ideal adhesive. When installing any panels to wet areas a parameter silicone seal is required to stop any water or moisture affecting the specialised coating.

Environmental credentials

Akril requires much less energy to manufacture than equivalent glass product.

Akril has also been awarded a green star rating by The Good Environmental Choice of Australia.

For more information visit www.geca.org.au



General maintenance

Cleaning Do's

- Wash with mild soap or detergent, with plenty of warm water.
- Dry with soft cloth or chamois.
- Grease, oil or tar can be removed with Hexane or Kerosene.
- Solvent residue should be removed by washing immediately.

Cleaning Don'ts

- Avoid window cleaning sprays.
- Do not use scouring compounds.
- Do not use steel wool.
- Avoid using harsh scrubbing brushes.
- Do not use the following: chloroform, acetone, benzene, toluene, xylene, dichloromethane, amyl acetate, glacial acetate acid, butyl alcohol, butyl acetate, cellusolve, cresols/phenols, ethyl acetate, chlorinated solvents, halogenated solvents, methyl alcohol, sulphuric acid (10%), dilute acids, MEK methyl ethyl ketone (PVC pipe glue).

Technical data

ITEM	TEST METHOD	UNIT	Akril panel
Specific gravity	ASTM D792	-	1.2
Tensile strength	D683	KGF/CM ²	0.3~0.4
Rockwell hardness	D785	-	M-100
Heat distortion	D684	Centigrade	100
Vicat softening point	D1525	Centigrade	118
Light transmission	D1003	%	93
Compressive strength	D695	KGF/CM ²	1200