

RedBOND Plus Transformation / Fabrication Manual

RedBOND Plus Aluminium Composite Panels (ACP), allow the following fabricating and transforming operations:

a) Cutting:-

When cutting **RedBOND Plus** panels lengthwise, it should be done preferably with a standard CNC machine or a vertical sheet cutting machine. When cutting ACP irregularly or making geometric figures, the cut has to be made in a professional fabrication centre. Always bear in mind that the surface has to be clean to avoid scratches and marks on the final product.

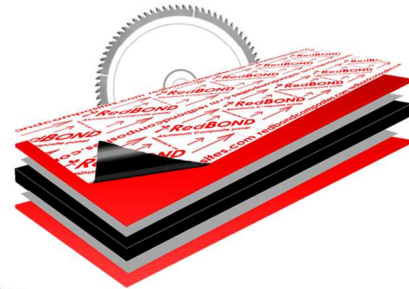
Cutting instructions for standard fabrication:

a1) Lengthwise:

- Saw blade diameter (steel): 120 mm
- Cutting Speed: 5000 rpm
- Feed Speed: 20 m/min

a2) Irregular:

- Routing bit diameter: 6 mm (2 flutes solid carbide)
- Cutting Speed: 17000 rpm
- Feed Speed: 12 m/min



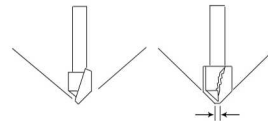
Another cutting option is to cut **RedBOND Plus** ACP with a shearing machine.

b) Routing:-

Routing **RedBOND Plus** panels should be done in professional fabrication centres, by using conventional routers or a CNC milling machine. When routing any irregular or regular shape in a fabrication centre, very high precision can be achieved.

Suggestions for routing in a conventional routing centre:

- "V" shaped routing bit with 45° angle (3 flutes solid carbide)
- Cutting Speed: 18000 rpm
- Feed Speed: 25 m/min

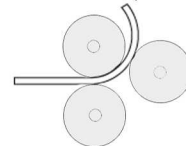


c) Curving:-

RedBOND Plus Composite Panels can be curved in any type of roller press. To determine the minimum and maximum radius you will be able to achieve by curving the panel (according specifications), you should take into consideration the curving specifications of the machine you are using, which is limited by its dimensions including the length of the rollers. To avoid delamination of the thin aluminium skin on the panel always curve RedBOND panels without previous fabrication.

Instructions for the use with universal curving machines:

- Curving radius: 150mm <R<1000mm Tolerance ± 7
- Curving radius: 1500mm <R<2000mm Tolerance ± 3.5
- Curving radius: 2000mm <R Tolerance ± 2



d) Folding:-

Folding allows you to obtain certain geometric figures starting with a flat panel. It can be realized after routing the panels and in whatever degree the client needs.

e) Drilling and Riveting:-

RedBOND Plus Aluminium Composite Panels can be drilled and riveted to any kind of surface; the only thing to take into consideration is using the correct type of drill (for drilling plastic and aluminium) or rivet, depending on the surface the panel will be fixed to. For panels subject to temperature fluctuations please consider thermal expansion of the ACP.

f) Punching:-

Punching the Composite Panels should always be made in specialized companies for this kind of fabrication. Today there are a wide variety of punching machines in the market who can work Aluminium Composite Materials like RedBOND Plus ACP.

Important for all processing jobs:

- Safety protection gloves and goggles must be used always when processing to avoid injuries.
- Do not remove plastic film until all processing jobs are completed.
- All processing must be made at temperatures above 10°C on coated surfaces.

All RedBOND products are chrome free and therefore fulfill the toughest European regulations. This makes RedBOND Aluminium Composite Panels a 100% environmentally friendly product made in Europe.

All RedBOND Panels are being manufactured exclusively with European raw materials which all include only those chemical substances which comply and are registered under the European Community REACH Regulation (Registration, Evaluation, Authorization and Restriction of Chemical substances).

