

<b>Fabricating Formica AR+ laminates</b>
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## **FABRICATING FORMICA AR+ Gloss laminate.**

### **INTRODUCTION.**

Formica Ltd AR+ high gloss laminates are highly resistant to scuffs and mar abrasion, having twice the performance of standard gloss laminates. Although most of the equipment and techniques used in the fabrication of normal laminates will apply, some additional techniques may be necessary to utilise the full potential of the product. (\*)

### **HANDLING and STORAGE.**

Care should be taken when handling AR+ laminates to avoid breakages and damage. When loading and unloading, sheets should be lifted, not slid. Individual sheets should be carried with the decorative face towards the body. Sheets become more rigid and thus easier to handle if they are bowed along the longitudinal axis. The sheets **MUST** always be handled by two people.

When transporting stacks of sheets with mechanical handling vehicles, pallets of adequate size and rigidity should be used.

Storage conditions should be same as those recommended for conventional laminates (18-25°C and 50-60% relative humidity)

Sheets should be stored flat and horizontal with the top sheet turned face down. A cover board should be placed over the stack to prevent top sheet curl. Where horizontal storage is not possible or where only small stocks are kept, these can be stacked on edge in slightly inclined vertical racks with support over the entire surface area, and cover board to prevent sliding. The recommended angle for such racking is approximately 80° from the horizontal. (Further details refer to technical manual, page 8).

### **CUTTING and MACHINING.**

AR+ laminates can be cut using the same Conventional tools and woodworking equipment as used for other Formica decorative laminates. Router cutters and saw blades should all be TCT or PCD and must be kept sharp to avoid chipping. All general recommendation (Formica Ltd) relating to fabrication and the codes of working practise should be observed.

### **PRE-CONDITIONING.**

The most important factors in achieving stability in bonded panels / components are the pre-conditioning of the core material, surfacing and backing laminates. Prior to bonding the AR+ laminate sheets and backing laminates should be stored together back to back in conditions similar to the anticipated end-environment for a minimum period of 3 days. (Refer to technical manual, page 9)

**SUBSTRATES.**

The recommended substrates for use with Formica Ltd AR+ gloss laminates are MDF. Chipboard and Plywoods may be used, however the use of these substrates could during the fabrication process encounter surface undulations/ telegraphing, (refer to tech info FSU 076)

**ADHESIVES.**

Formica Ltd AR+ gloss laminates should be properly press bonded to the substrate using a rigid or semi-rigid adhesive such as UF, PU, and PVA or in some cases sprayable neoprene. Particular care must be observed when using hand applied contact adhesive.

Any adhesive smear should be removed with a damp cloth before curing takes place.

**PRESSING.**

Cleanliness in the flat bed pressing operation is of paramount importance. (\*)

Formica Ltd AR+ Gloss laminates may be hot pressed, but the press temperature should not exceed 80°C. Cold or warm pressing will produce better stress free panels.

Pressures should be normal for the type of adhesive used, typically 2-5kg/2 for PVA, and 3-5kg/2 for UF. (Refer to tech info FSU 076)

**POSTFORMING.**

AR+ Gloss laminate, having a nominal thickness of 1.2mm, are postforming grade (HGP or PAR) both abbreviations mean the same grade.

The forming operations can be performed on conventional postforming machines, (i.e. Static or Continuous) However due to the increased thickness (1.2mm) the forming temperatures are higher and the window of formability much wider. The forming temperature is between 150°C and 170°C, and the minimum recommended forming radius is 15mm in the longitudinal direction.

The above temperatures are intended as a guide and may vary slightly depending upon the ambient workshop conditions and type of postforming equipment. It is, therefore, recommended that fabricators conduct their own preliminary trials. (\*)

**COUNTER VENEERING - BACKING.**

- For optimum flatness use the same laminate on both sides, (Category A)
- Flatness meeting BS 4965 requirements (1mm maximum distortion over 600mm length) can be achieved using the appropriate AR+ balancer / backing laminate. (Category B)
- For small panels, or where flatness is less important, any conventional laminate backing board may be used.(Category C)

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Formica AR+	Category A (Optimum flatness)	Category B (Flatness within BS 4965 limit)	Category C (For sealing purposes only)
AR+ 1.2mm thick	Laminate identical to that of face laminate	AR+ Backing	Any conventional laminate backing laminate