PROTECTING THE SURFACE

Scratch and Impact Protection

Formica Brand Laminates and surfacing material are resistant to scratch and impacts under normal use conditions.

- Do not chop, slice, pound or hammer on any laminate surface
- Knives or other sharp utensils may slice or scratch the surface
- Heavy blows from a hammer or metal tenderizer may crack or gouge the surface
- Cookware still hot should not be placed directly on laminate surfaces
- Avoid ironing or placing a hot iron on laminate surfaces
- Do not place lighted cigarettes directly on laminate surfaces

Ordinary Cleaning

In most cases, you only need to use a clean, damp, non-abrasive cotton cloth and a mild liquid detergent or household cleaner and rinse with clean water. Do not flood the laminate, since water can penetrate and cause the substrate to swell. Dry the surface with a soft, clean, non-abrasive cotton cloth.

Chemical Damage

Never use cleaners containing acid, alkali or sodium hypochlorite. These cleaners will mar, etch, corrode and pemanently discolour the laminate surface. Also, make sure that bottles, rags and other materials contaminated with these cleaners never come in contract with the laminate surface.

HANDLING

- Care should be taken when handling decorative laminates to avoid breakages and damage.
- When loading and unloading, sheets should be lifted, not slid.
- Abrasion between decorative faces should be avoided.
- Individual sheets should be carried with the decorative face towards the body.
- Sheets become rigid and thus easier to handle if they are bowed along the longitudinal axis.
- Large sheets should always be handled by two men.
- Sometimes it is convenient, especially with thinner grades of laminate, to roll the sheet, decorative face inward, into cylinder of approximately 600mm diameter.
- When transporting stacks of sheets with mechanical handling vehicles, pallets of adequate size and rigidity should be used.

STORAGE

- Formica® decorative laminates should preferably be stored face to face, flat in horizontal racks.
- The use of a cover board for covering the top sheet and keeping it flat is recommended. If this is impractical, the top sheet should be turned decorative face downwards, to prevent surface damage and warping.
- Where horizontal storage is not possible or where only small stocks of assorted colours and patterns are kept, these can be stacked on edge in slightly inclined vertical racks with support over the entire surface area and a cover board to prevent sliding.
- The recommended angle for such racks is approximately 80° from the horizontal.
- Decorative laminates should always be kept in an enclosed dry store together with corresponding substrate materials, backing boards and adhesives, at a temperature of not less than 18°C (65°F).
- When materials are brought into a workshop from temperatures or humidity levels different from ambient (e.g. after delivery), they should be allowed to stabilise before fabrication. Usually a minimum of three days is required.

DO'S & DONT'S

PRE-CONDITIONING

- The most important factor in achieving stability in bonded panels is the preconditioning of core materials, surfacing and backing laminates prior to bonding.
- Pre-conditioning ensures that the effects of differential movement, caused by the materials' reaction to changes in relative humidity, are minimised.
- The following procedure will allow the laminates to reach equilibrium; any subsequent movement, caused by changes in humidity, will then be equal on each side of the bonded panel and the risk of bowing will be greatly reduced. Decorative laminates and core materials should be conditioned before bonding so that all materials reach equilibrium and are neither too dry nor too damp, the latter being most important at the time of pressing. Optimum conditions are best achieved in a dry storage area (about 20°C and 50 60% Relative Air Humidity).
- The sheets that will form the opposite faces of the same composite board are best conditioned as a pair, with their sanded backs together.
- Sheets paired in this manner should be stacked, covered, and left for a minimum period of three days in order to reach moisture equilibrium.
- This will ensure that they achieve near identical moisture contents prior to so that bonding, and any subsequent dimensional movements will therefore be similar in both magnitude and direction on each side of the composite panel.
- Wood-based core materials should have a moisture content of around 9%.
- The moisture content of laminates cannot be measured with a normal moisture meter, but it is essential that the face laminate has the same moisture content as the correspondingbacking board. If the composite boards are to be exposed to constant low relative humidity in their subsequent application (e.g. radiator casings), the laminates and core materials should be pre-conditioned in warm dry conditions for a suitable period in order to pre-shrink the materials and so avoid any subsequent shrinkage stresses.
- Panels and boards faced with decorative laminate will nearly always be required to have the reverse side faced with a similar material to counter balance the effects of dimensional changes that may take place.

ADHESIVE BOND FAILURE (BUBBLING)

Adhesive bond failure, commonly known as bubbling, may occur in conditions of high humidity or wetting if there are weak areas of adhesive bond (usually associated with hand-applied contact adhesives).

If the laminate has been bonded in normal dry conditions using contact adhesive and the panel is subsequently subjected to high levels of humidity, the laminate will expand.

The amount of creep will depend on the panel dimensions (the larger the panel the greater the movement), and if there is a weakness in the bond the laminate may lift from the substrate.

To reduce the risk of bond failure, the following measures should be taken:

- If possible, avoid the use of contact adhesives (particularly hand-applied) if the panels are to be installed in wet areas or areas of high humidity.
- If contact adhesives must be used then panel widths should not exceed 600 mm. The adhesive layer must not be too thick, it must be applied evenly to both surfaces and the whole area must be at the correct tack-level when bonding takes place. These points are particularly important if the edges of the laminate are 'captured', preventing outward movement of the laminate at the edges.
- To minimise dimensional movement, the longest dimension of the panel should be cut in the length direction of the laminate sheet, i.e. parallel with the sanding lines (laminate movement is approximately twice as great across the sheet width as it is along the length).
- The laminate should be pre-conditioned in temperature/humidity conditions similar to those of the final installation for at least three days prior to bonding.