



## **PANEL HANDLING AND STORAGE GENERAL RECOMMENDATIONS**

Plywood, like any other building product, requires proper handling and storage to prevent damage and assure reliable performance. Despite its cross laminated construction, face veneers, panel edges and panel corners are vulnerable to damage and should always be protected.

Plywood is manufactured at low moisture content and while small changes in moisture content will not appreciably affect its dimensions, large changes should be avoided since they may encourage severe warping, checking of the face veneer with consequent impairment of its qualities as a paint base. It is good practice to store plywood which is to be used for interior finish under conditions that approximate those it will experience in service.

### **Caution**

Tulsa Concrete form panels are edge sealed during manufacturing. However, it is recommended to apply an extra sealing before use and if you have to cut during use, it is necessary that fresh edges be re-sealed to avoid panel damage caused by capillary penetration of humidity.

Use the appropriate form remover (same as recommended, chemical reactive releases form non porous surfaces) before using the panel the first time and then, before each use. It is recommended to use an appropriate remover even if the panel is pre-oiled.

Although cleaning a Tulsa Concrete form panel is much easier and quicker than traditional form materials, it is important to only use fiber spatulas and synthetic materials when cleaning forms to prevent damage to the faces which might occur with metallic tools.

Although Tulsa Concrete form panels are very resistant to the abrasion and impact, as with any highly finished surface, care must be taken during cleaning and use to prevent damage. Always use the appropriate vibrators and techniques to protect panels' surface.

## **Storage**

1. Store plywood panels flat and level preferably under a roof.
2. The top panel in the stack should be weighted down to minimize warpage from humidity.
3. Keep finish faces inward and cover stacks to protect from bumping and abrasion
4. When stacking, align bunks or pallets vertically to avoid warping of panels
5. Protect panel edges and corners. Panels to be moved by a forklift should be placed on pallets or bunks when received to avoid damage by fork
6. tines.
7. Carry panels on edge (always being careful not to damage faces, edges and corners).
8. Panels to be transported on open truck beds should be covered for protection from weather exposure
9. When plywood is used as a finishing material, deliver to job-site at the last possible moment
10. Protect panels from sunlight, water or excessive humidity. If moisture absorption is expected, the steel banding on panel bundles should be cut to prevent edge damage.

## **Cleaning**

Proper supervision of forming operations on the job site should extend to the cleaning and repair of forms. Plywood forms, in common with all other types, should be cleaned immediately after stripping. Concrete particles may be removed by using a wide blunt blade, straw broom or burlap sacking. Many contractors use a power-driven nylon brush. There are also several proprietary solutions available for softening concrete adhering to the plywood.

## **Handling**

It is generally acknowledged that the greatest damage to forms occurs during the various handling operations. Care should be taken to prevent chipping, denting and damage to panel edges. Thorough planning of the whole forming operation will keep handling to a minimum. In the interests of speed and efficiency, mechanical handling devices should be used whenever possible.

## **Repairing**

It is recommended that plywood forms be inspected after each use and repairs such as patching or re-nailing carried out as required.

Plywood forms should be clean and dry before repairs are made. Where the grade of plywood and the type of form are suitable, the plywood may be reversed. Small splits and depressions can be filled with a suitable patching compound sanded flush.

## Concrete Finish

The quality of the concrete finish and the expected number of re-uses of formwork plywood are affected by a number of key factors in terms of correct site practice. The plywood panels must be transported and stored in a relatively dry condition and protected from the elements at all times.

When first exposed to the elements and during the early uses of the board it is likely to show some localised swelling of the wood veneer caused by moisture ingress, which may leave impressions in the face of the concrete. Where the smoothest possible concrete finish is required from the first use we recommend the use of TULSFORM MDO/ MDO 323 w/backer. When using the TULSFORM MDO/ MDO 323 w/backer the light brown side must be used. With TULSFILM/ STANDARD film, the phenolic film overlaid board, it is recommended the forms are "conditioned" before use, by applying a light wet slurry to the board or a grout wash, prior to the first pour. This should make any localised swelling during the first few uses less noticeable. It is crucial that all exposed edges are sealed with a waterproof sealer and all nail holes / tie – bolt holes are also counter sunk and sealed. Do not bounce rebar on the face of the board as this will also damage the face and increase the ingress of moisture / localised swelling. Apply a suitable filling compound or mastic to joints between panels to minimise grout loss. The use of water proof sealer to be applied twice on all exposed / cut edges and pre drilled tie holes is recommended. Remember wood is hygroscopic and will swell if exposed to moisture, reducing the performance of the board. If you follow correct site practice you will get maximum usage out of the panels, if you leave it exposed to the elements, and not seal the edges, then the board will not perform as intended.