

MonoPan®

A Unique Innovation In Composite Sandwich Panel Technology



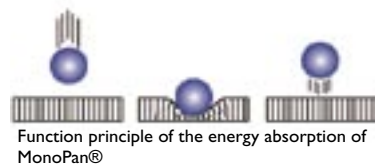
MonoPan® is a sandwich panel made of polypropylene (PP). While the honeycomb core is pure PP, the PP face sheets are reinforced with continuous fibres. This combination, compared to other panels, gives a much higher shock resistance and stiffness with extremely light weight. The beauty of MonoPan® is its unique thermofused welding technology of the core to the face sheets.



The special honeycomb core in MonoPan® is an additional elastic area, whereby high energy absorption without core deformation can be achieved.



MonoPan® view in the cell direction



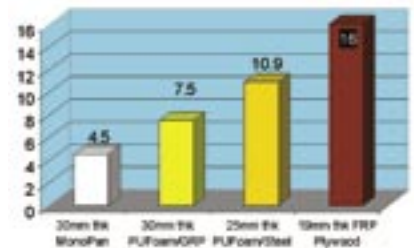
Function principle of the energy absorption of MonoPan®

The impact-resistant, load-sharing face sheet increases the effectiveness of this property and promotes the excellent ruggedness of MonoPan®.

MonoPan® is the first sandwich panel where the face sheets are not bonded with an adhesive but are thermofused to the core. Honeycomb and face sheets form a homogeneous, strongly fused thermoformable product: Delamination is not possible anymore. MonoPan® fascinates with its excellent shock resistance and stiffness which offers new possibilities in industrial applications.

Main Features of MonoPan®

- Light weight.



Weight of MonoPan® versus other panel types kg/m²

- Will not absorb water or moisture and is resistant to a wide range of chemicals.
- The continuous fibre reinforced PP face sheets and the proven honeycomb structure can resist high impact, where other materials would be damaged.
- Can be processed and fabricated using conventional tools.
- Is easily cut, folded, formed, joined and can be thermoformed.
- Can be finished with a variety of decorative systems.
- Easy to repair.
- 100% recyclable.

MonoPan®, with superior properties for a variety of uses is the first composite sandwich panel where delamination is no longer possible.

How to use MonoPan®

Typical Applications

Transportation

- Truck and Trailer Bodies
- Caravans and Mobile Homes
- Shipping Containers
- Bus and Rail Flooring
- Horse and Livestock Trailers

Materials Handling and Packaging

- Transport Containers
- Returnable Logistics Boxes
- Protective Cases

Building and Construction

- Low Cost Housing
- Temporary Buildings
- Transportable Structures
- Building Fascia Panels
- Scaffolding Platforms
- Lightweight Flooring
- Formwork Boarding

Marine

- Flooring and Internal Panels

Miscellaneous

- Off Road Mats
- Retaining Walls
- Animal Stables and Stalls
- Shutter and Swing Doors
- General Fabricated Products



Manufacturing and Fabrication Methods



MonoPan® can be accurately cut using regular hand tools, laser and water jetting techniques. Being a thermoplastic MonoPan® can be folded and bent using thermoforming or cold methods. Edges and recesses can also be formed.



MonoPan® can be assembled with mechanical connections such as rivets, bolts, inserts and screws. It can also be easily joined by welding, thermofusion and adhesives. MonoPan® can be finished and decorated using commercial paint systems, laminates, films and decals.



Thermo Composite Technologies Pty Ltd

incorporating TCT Manufacturing

3 Geelong Court, Bibra Lake, Western Australia 6163

Telephone : +61 8 9434 5252 Facsimile : +61 8 9434 5253

Email : info@tctman.com.au www.tctman.com.au