

Product Description

Mek-Dek Glass Reinforced Polymer GRP Permanent Formwork Composite panels are designed to support bridge decks during concrete pours and remain in place thereafter. This technique is otherwise known as Stay-In-Place formwork or sacrificial formwork.

With our in-house design capability, Mekina Industries can design and manufacture panels to suit specific applications.



Product Applications

The most common application for Mek-Dek Composite formwork panels are bridge structures with $\leq 1.4\text{m}$ clear span between supporting steel or pre-cast beams. Panels are installed/sealed to beam to allow cast insitu deck. Top and bottom surface is textured.

Key Features

- Provides safe working platform
- Highly durable + sustainable
- Offsite installation often suitable on steel braced beams to minimise site works
- Safe for handling
- High strength to weight ratio
- Suitable for manual installation
- Versatile to allow for complex geometries when required
- Manufactured to size to minimise site works
- Zero water absorption (0.5mm GRP equivalent to 50mm over concrete cover)
- Panels install simply from above
- Resistant to chemicals and salts
- Sealant system prevents grout loss
- No dismantling or removal required
- Non-corrosive & lightweight

Colours

Our panels are manufactured in RAL 7023 Concrete Grey as standard. If your project requires a different colour, simply provide us with a RAL colour.

Material

Glass Reinforced Polymer (GRP) Mek-Dek composite panels are produced from compressed/laminated OSB 3 structural grade boards, laminated and encapsulated together with glass fibres using Polyester Thermosetting Resin system.

Product Information

The design table below shows our 20mm and 38mm panels (thickness is dependent on span and load applications. Should you have a requirement for larger panels to cater for greater loads or varied shapes, please get in touch as we also offer bespoke manufacture to order.

Panel Type	Panel Width (mm)	Panel Height (mm)	Weight (kgs/m ²)
20/1220	1220	20	17
38/1220		38	30

Data

The below table is based on panels carrying a 200mm concrete deck depth (25kN/m² Concrete Density) along with 1.5kN/m² Live load. The span data table below has been created in accordance with Highway Structures & Bridges CD 359 Design requirements for permanent soffit formwork.

Code	Span (m)															
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	
20/1220	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
38/1220	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

Handling

We advise the installation team to check the weight of each panel to ensure it meets the sites' minimum lifting threshold. There are no sharp edges on the panels, however suitable PPE (including gloves) is advisable.

Cutting

Should the need arise to cut any part of the Mek-Dek panel then this must be carried out by a competent person nominated by the Contractor/Installation Manager in line with all Health and Safety requirements.

Please ensure you wear FFP1/2/3 Mask-Higher Grade P3 or Respirator when cutting or drilling, along with eye protection, gloves, and all other relevant PPE on site.

Cutting Through Composite Panels Requires The PPE Listed Below

- A Circular saw or Jig saw can be used to cut through Composite Panels taking care to keep cuts clean and straight by not forcing the blade through the panel.
- Cutting that is required 1 inch into any edge of the panel should be treated with extra care to avoid hitting fixings embedded into the panel.
- Cut edges should be protected after any cut either using sealant tape supplied or bonding paste advised by Mekina Industries Ltd.

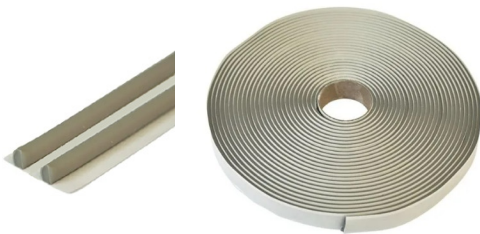
Use of Power Tools

Please follow general guidelines when cutting or drilling GRP products with power tools, as the material produces a non-toxic biologically inert dust. Dust levels should be kept as low as is reasonably practicable and must not exceed occupation exposure limits. In isolated cases, GRP dust may cause a slight, transient skin irritation. Should these effects become prolonged or should any signs of a rash occur, medical advice should be sought. All exposed skin should be thoroughly washed with soap and water. Any eye contamination should be washed out with copious amounts of sterile water.

Sealant System

Sealant System Key Features

- High Tack
- Extremely flexible and strong
- Colour - Grey
- Non-Toxic
- High Weatherproofing performance



Butyl Twin-Track Bead 2x Ø6mm x 10m long roll

Used to seal between the panel and supporting structure (concrete/steel).

Sealant is provided in 10m rolls for manual application to beam prior to panel installation. Please ensure beams are dry and free of debris. Push firmly to ensure good adhesion. Paper backing to be removed prior to panel installation.

Butyl Tape 1x50mm x 25m long roll

Used to seal between adjoining panels on top surface.

Sealant is provided in 25m rolls for manual application on top of joints of panels once in position. Please ensure panels are dry and free of debris. Push firmly to ensure good adhesion. No backing to be removed.

Transport / Packaging

Mek-Dek panels should be unloaded with care. Panels arrive banded to wooden chocks/skids and are fully shrink wrapped with appropriate information included. We advise storing panels in a secure area away from heavy machinery until installation.

We advise to store composite panels prior to use in secure area away from heavy machinery and standing water until installation.