

polycon 



Handling,
treatment
and storage

6.0 Handling, treatment and storage

6.1 How to deal with the material on site

Packing

Packing is done according to the type of the contract (flat plate, shaped complex spatial and panels). Individual components or assemblies are fitted with protective elements (PE foil, canvas covers, protective plastic and paper corners and edges, etc.) as needed and then they are replaced into shipping units (pallets, racks, containers, etc.). Glass-fiber reinforced concrete Polycon slabs (the Polycon plates) are stored in a vertical (upright) position so that the longer side is located on a pallet on the soft furnishings. The plates are always interspersed with a flexible layer, in order the visible surface of transported plates were separated from each other and to prevent possible damage of the finishes and visible structures. Polycon plates are always placed by facing (visual) side to each other and backing side to each other.

Loading / unloading / transport

Handling with metal racks, pallets and container shipping is possible using a forklift truck (this transport can be done only on a sufficiently flat and paved surface). The fork of the forklift truck must be fully retracted under the rack and palette (across the whole width) to prevent it from slipping from the fork or pallet when handling. During any manipulation it is necessary to take extra care.

Metal racks or pallets can be handled by crane in compliance with all security measures and policies (especially OSH). During handling by crane, the stand (pallets, containers) must be secured to prevent the particular plates or surround elements from tilting or release!

Handling with elements or transport units (rack, pallet, etc.) must be done on a flat surface (especially when handling with forklift truck) to avoid uneven loads and possible damage.

It is Important to use only such transport vehicles / equipment that are able to bear weight of individual elements or entire package. Weight of individual components or package is listed in the delivery note or on the transport packaging.

Products from Polycon material must be transported only by covered transport vehicle (protection against inclement weather, dust, etc.). Transported drives and units (racks, pallets, and containers) must be secured against possible shift during transport and handling.

It is not permitted to carry or store the transport unit laid on each other (stack them), unless it is recommended by the supplier in writing.



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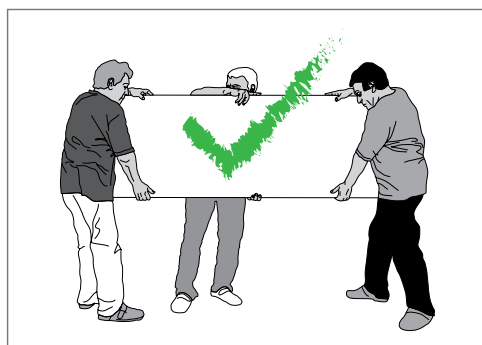
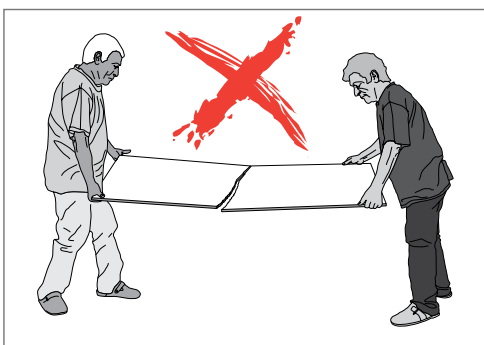
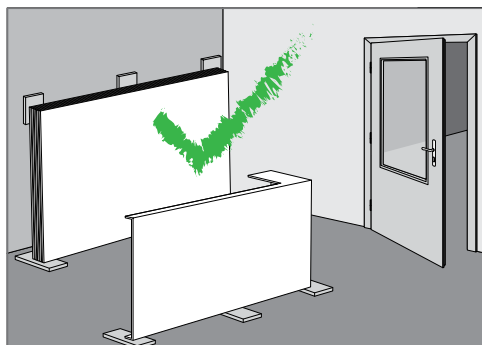
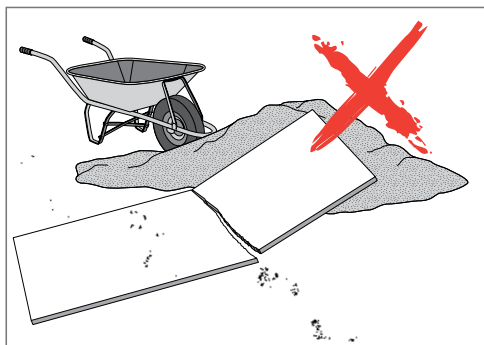
6.2 Acceptance of goods

Transport units must be inspected during unloading due to possible damage to the packaging and goods that might occur during shipment or during transportation. In such event the contractor shall be informed immediately by giving written record of the suffered damage, including photographic documentation. Damage to the packaging or the goods during transport must be reported to shipping documents the shipper on receipt of goods by the customer. Later complaints will not be taken into account!

6.3 Handling and the most frequent mistakes when handling

Manual handling

Manual handling of Polycarbonate plates when loading, unloading or custom assembly must always be carried at least two (2) or more persons (depending on the size and weight of the components). Polycarbonate plates are transported only in a vertical (upright) position to prevent malfunctions, cracks, or even breaking them (you need to take extra care and avoid vibration plates or twisting around corners to avoid damage)! Polycarbonate plates must never be drawn along the base (the ground and the like), also it is not possible to move the plate on each other. Protective slip gloves must be used during handling to prevent slipping out during handling of the plates and simultaneously contamination of visible surfaces.



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6.3 Handling and the most frequent mistakes when handling

Tool using

When using auxiliary products for handling it is necessary to give the attention and these products design so that they can be used to avoid damage of the edges or surfaces of glass-fiber reinforced concrete elements. Mating surfaces must have softening features, rounded edges and especially they must be safe. The holes for the future anchorage of plates shall not be used to manipulate because their using for other purposes will damage them.

Handling tools must have sufficient structural thickness to allow the safe handling and at the same time to allow removing of this tools from the joints after the fitting of two adjacent elements in order to avoid damage of edges and corners.

When using suction cups for manipulation it is necessary to check their suitability first and also whether their use will not remain significant traces on the surface. Type of handling suction cups and their use with regard to the size, weight and structure elements must be consulted with the manufacturer (vendor rental) of these devices.

6.4 Using the rocker arm on the crane

The balance beam must be used to ensure safe and proper handling of the stands or goods (pallets, cages) by crane to prevent from overloading of construction of shipping containers and carry the tension to deposited material.

Supporting elements must be routed under the bottom edge of the pallet or product that the weight is evenly carried to the greatest bearing area.

For the handling of elements it is forbidden to use the installed constructions or profiles or draping elements so that the influence of its own weight cannot occur mixed or combined loads. The plates must not be hung by balance beams but they must always be carried by them only!!

6.5 Shape deformation

Shape deformation can occur during plate storage of or during their transport by humidity or temperature change (such as deflection, etc.). This influence is evident in the products around the outer areas of transport units and there the uneven (one-sided) absorption of atmospheric moisture into the material or unilateral thermal exposure occurs. In the case of flat plates you can additionally shape the plate by storing in a dry and clean environment on a flat surface with concave side up and the board is to be stored around 24–48 hours (material does not have the shape memory). In any case, the board must not be burden by any loads; the creep takes place by its own weight.

For small deflections or shape deformations that can normally occur for flat plates, deflection is eliminated by their assembly when the plates are adapted to supporting sub-structure. Material so appropriately takes the flatness of the structure.

The additional creep is almost impossible due to the complicated shapes at shaped elements. Therefore, it is recommended to take adequate care of their storage in a dry and clean environment on a flat surface and to take out the elements from special transport packages immediately before installation.

6.6 Storage on site and moisture penetration

All panels must be stored in dry, covered and ventilated areas. Use a suitable inserts (e. g., polystyrene) to prevent deformations or damage, both in the horizontal and vertical axis due to the load (pressure). Interlayer material (preferably Miralon) must be used, which does not absorb moisture and does not leave consecutive colored spots to avoid delineation of these structures into products. In leaning the first plate leans with the reverse part to the wall and the boards are always placed facing (visual) surface together and the backing surface from each other (spatial elements stand alone!).

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6.6 Storage on site and moisture penetration

Do not store panels or spatial elements stored at each other! Maximum number of boards propped against each other is 5 pcs (unless a different number specified by the manufacturer). Polycon boards should not be stored in a horizontal position or on each other or put the burden on them and even pedaling etc.!! Due to big weight plates and Polycon spatial elements and the kind of work it is necessary to work with care especially during handling and assembly and work in compliance with generally applicable safety and health – OSH.

* Although the material is intended for outdoor use, due to its improper storage of the open space its appearance may change. Ingress of water between individual plates may occur due to precipitation (snow, condensation) during storage outside covered spaces and when missing protective covers, and subsequently a permanent change in the appearance of the plates occurs due to prolonged and uneven evaporation of water because it make it impossible generalized venting of material such as when it is mounted.

The protective foil for the transport unit is only used for protection in the transportation. For long-term storage it is necessary to ensure natural conditions (ventilation).

Ventilation of plates on the facade

Change of tonality may occur due to increased humidity (especially during the winter or spring) i. e. the darkening but later by changing of air humidity and the effect of natural ventilation (air circulation) it returns to light tonality. The progressive unification of area shade will also be carried out due to natural ventilation, because the implementation is done in stages and the environmental conditions (under which the individual stages are implemented) may be different

6.7 Surface cleaning

Cleaning and maintenance of glass-fiber-concrete surfaces (if necessary and according to the nature of the surface – surface treatment) is performed using low-pressure water washing and soft plastic bristle brush. For long service life and maintain the properties not recommended cleaning with steam or high pressure cleaning equipment. Products from Polycon material are standard in the natural design. According to customer requirements and usage surface modification can be made through transparent (transparent hydrophobic) or pigmented (colored) paint. They give the characteristic appearance and coloring on visible surface of products and simultaneously increase its resistance to external influences in climatic conditions. Glass fiber-concrete surfaces can be protected against graffiti pollution within Polycon anti-graffiti program. This is a special paint, designed for preventive protection of surface and allowing the subsequent removal of any signs of graffiti. Antigraffiti product forms a protective layer against the colored sprays (such as acrylic, epoxy, nitrocellulose, polyurethane, alkyd spray, etc.), decreases absorption of surface water, reducing the possibility of facade soiling, algae, moss and lichen, but also maintains a high water vapor permeability. Cleaning of graffiti from surfaces preventively treated with special anti-graffiti within Polycon program requires special remover (see technical data sheet). In violation of these instructions and regulations, the supplier is not liable for any damage to or destruction of records and spatial Polycon elements and any complaint cannot be accepted.

6.0 Handling, treatment and storage

6.8 Repair kit and its using

In the event of minor damage to edges and corners during transportation or installation on the construction, the local repair is possible. Repair Polycon REPKIT kits are used for repairs and they are available on request at the manufacturer. Instructions for minor repair Implementation is a part Polycon REPKIT repair kit.

When the component elements are damaged (in particular anchor points) the anchor point must be done again away from the damaged area so as not to affect the overall capacity and structural safety.

Repair kit

Guide for the repair of glass fiber-concrete panels

In the event of damage to the surface or edges of glass-fiber reinforced concrete panels (edge offended, insulted the corner, local surface roughness, etc.) these surfaces or edges can be repaired using the following steps:

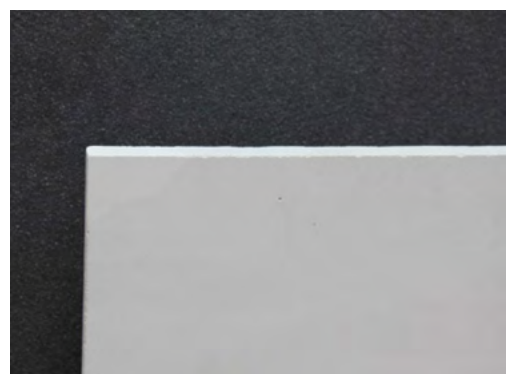
1. First, it is necessary to assess the repair extent and choose the appropriate solution (remedy is used for repairing small-scale and aesthetic corrections).
2. In the event that size and nature of correction is in accordance with paragraph 1, their repair can start
3. In the first phase, it is necessary to first clean the repair area. Make sure that the underlying surface is clean and free from ice and free of grease, paint, mold release agents, dust and loose particles.
4. In the event that it is a part repair, wherein the damaged part is still part of this element (minor cracks and the like) the repair can be accomplished either by adding the missing part or damaged or damaged portion being completely separated and then reshaped with the correction of the mixture and separate part of the so-glued stick back and only finishing of surrounding the missing part.

Repairs should be done with regard to the environment, especially with regard to the climatic conditions. The repairing areas must be protected from the sun, wind and rain. Ambient the surface temperature is up to 10 °C.

"Open Time" for use in a matter of minutes (3–5 minimum), so it is necessary to process only the amount that can be effectively utilized.



Before



After

6.0 Handling, treatment and storage

6.8 Repair kit and its using

Repair kit M32

Repair manual for glass-fiber reinforced concrete panels

In the event of damage to the surface or edges of glass-fiber reinforced concrete panels (edge offended, insulted the corner, local surface roughness, etc.) these surfaces or edges can be repaired using the following steps:

1. First, it is necessary to assess the repair extent and choose the appropriate solution (remedy is used for repairing small-scale and aesthetic corrections).
2. In the event that size and nature of correction is in accordance with paragraph 1, their repair can start
3. In the first phase, it is necessary to first clean the repair area. Make sure that the underlying surface is clean and free from ice and free of grease, paint, mold release agents, dust and loose particles.
4. In the event that it is a part repair, wherein the damaged part is still part of this element (minor cracks and the like) the repair can be accomplished either by adding the missing part or damaged or damaged portion being completely separated and then reshaped with the correction of the mixture and separate part of the so-glued stick back and only finishing of surrounding the missing part. In the case of major repairs, we propose to carry out the pre-test. This cannot be used to fill expansion joints (expansion joint between two elements).

Repairs should be done with regard to the environment, especially with regard to the climatic conditions. The repairing areas must be protected from the sun, wind and rain. Processing temperature + 10 °C to + 30 °C.

"Open Time" for use in a matter of minutes (3-5 minimum), so it is necessary to process only the amount that can be effectively utilized.

Complete hardening is finished after 7 days (abrasion resistant after approx. 24 hours).

The optimum water-cement ratio: Approx. 32 % (the mixing ratio, for example: 5 kg KIT M32: approx. 1, 6 liters of pure cold water)

Cleaning products: Water (fresh) for cleaning tools or hardened cement removing

Storage: in a cool and dry place. Storage capability in unopened containers – 6 months

The processing procedure: Mixing until a homogeneous mass is identical timbre. After three minutes, the mass is again mixed! The mixed material must be processed within approx. 45 minutes! Over processing time the slightly stiff material can be mixed without adding water and thus regain to workable consistency (doable once). KIT M32 is injected into the joint through a rubber trowel or a spatula (for spatial parts), surface must be slightly dampened with clean water immediately before use. Excess material is downloaded in a diagonal direction; optionally it is applied again across the board. Freshly paired surfaces must be protected with appropriate action against direct sunlight, strong winds, respectively drafts to prevent hardening of the grout. In case of doubt we recommend wetting the surface with clean water to ensure a successful course of the curing process (hydration).

After curing, the surface can be lightly sanded (fine finish) to unify the surface.

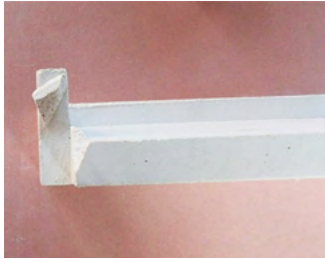
Depending on the used raw materials, the individual production batch may vary slightly in color shade.

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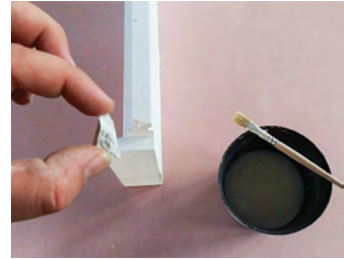
6.8 Repair kit and its using



1. Spatula, brush or sponges, abrasive stone, abrasive sponge, water, liquid glue, cement putty.



2. Checking the surface, free of loose surface material, dust, grease and other contaminants.



3. After cleaning, the liquid adhesive is applied to the damaged areas.



4. Mixing (ratio of liquid adhesive and water 1:10).



5. The final consistency should be like putty plasterboard.



7. Liquid adhesive is applied to the damaged area with a brush or a sponge (in the case that the damaged portion is still part of the panel and the adhesive is pressed into the gap).



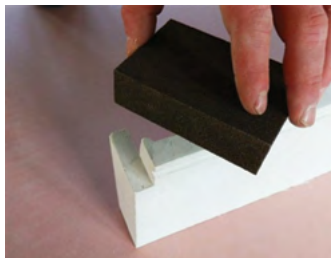
8. Liquid adhesive is applied to both parts.



9. After applying the liquid adhesive, both parts are placed together and lightly pressed (the excess glue carefully wiped), curing approx. 2–3 hours.

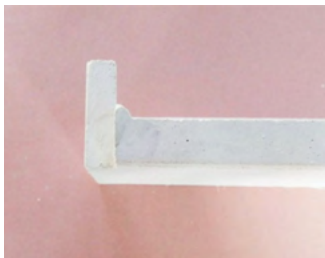


10. When it comes to major repairs, cement sealant should be applied in multiple layers.

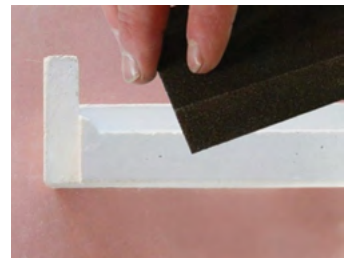


11. Between the layers, it is necessary to wait for hardening approx. 24 hours before applying the next layer of cement paste is necessary to abrade the previous layer and moisturize.

12. The foregoing procedure is repeated until the desired appearance.



13. After curing can proceed (if necessary) to complete the missing parts (offended edges, corners, holes, etc.) using the cement, water and a little liquid glue and spatula.



14. At the end of the surface is lightly sanded to unify the surface, then it is possible to unify the coating on the repaired parts, such as color paint or hydrophobizing.

