REUSABLE AND MODULAR FORMWORK IN ABS FOR WALLS

geopanel
the universal panel for walls

• LIGHT
• PRACTICAL
• REUSABLE

www.geoplast.it
CONSTRUCTION and RESPECT: This is the vision which characterizes the work of Geoplast. To build buildings respecting the environment. Beginning from the choice of the raw materials. Our plastic formwork perfectly embodies this principle.

THE ANNUAL WORLD CONSUMPTION OF WOOD IS EQUAL TO 1.5 BILLION M³, OF WHICH 55% IS USED IN CONSTRUCTION

After having exhausted the resources of timber in Southeast Asia and Central Africa, logging is causing the deforestation of the Amazon Rainforest, which is considered the green lungs of our Planet.

In the last three decades 55 million hectares of rainforest have been cleared, an area corresponding to the territory of France.

This is why we decided to make our contribution creating a line of formwork in plastics, a recyclable material that is the only sustainable alternative to wood and cardboard.

We have made them with special attention to their weight to reduce the amount of energy required for their handling: this is yet another form of respect.

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GEOPANEL is an easy and intuitive system of modular formwork in technopolymer used to build walls, foundations and columns in concrete.

The wide range makes it easy to produce structures of any size and shape.

Why ABS
(Acrylonitrile Butadiene Styrene)

- High mechanical strength
- Shock resistance
- Thermal stability (-30°C / +70°C; -22°F / +158°F)
- Very high surface quality
- Recyclable material

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GEOPANEL
ADVANTAGES

The only light, reusable and modular system for concrete wall production

light
Weighting just 11 kg, GEOPANEL can be handled quickly on site without having to use cranes or other mechanical lifting devices

fast
Light and easy to assemble, it can be installed and handled by a single person

modular
All elements are 600 mm long and only the elements necessary for the pour are used

 reusable
GEOPANEL is cost effective as it can be reused more than 100 times when properly used and maintained

dismantling
Concrete does not stick to plastic: dismantling is extremely easy, the forms can be cleansed using just a little water, without any need of detergent

storage
GEOPANEL can be safely and conveniently stored even in damp places
GEOPANEL 120 x 60

THE MAIN PANEL

Up to 60 KN/m² fresh concrete pressure

GEOPANEL MATERIAL

<table>
<thead>
<tr>
<th>Acrylonitrile Butadiene Styrene</th>
<th>ABS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient of thermal expansion</td>
<td>0,05 mm/m/°C</td>
</tr>
</tbody>
</table>

SIZE

<table>
<thead>
<tr>
<th>LENGTH</th>
<th>1200 mm (actual size 1210 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEIGHT</td>
<td>600 mm (actual size 605 mm)</td>
</tr>
<tr>
<td>THICKNESS</td>
<td>80,00 mm</td>
</tr>
</tbody>
</table>

The handle

The standard fixing item for all Geoplast Formwork

Light and intuitive
Firmly locks with a simple 90 degree turn
Strength (guaranteed by specially engineered materials)

HANDLE MATERIAL: POLYAMIDE - COEFFICIENT OF THERMAL EXPANSION 7·10⁻⁵ (1/K 10⁻⁵)

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# Items and accessories

## Dimensional Tables

<table>
<thead>
<tr>
<th>GEOPANEL 120 x 60 x 8</th>
<th>GEOPANEL 20 x 60 x 8</th>
<th>GEOPANEL 25 x 60 x 8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>actual size (mm)</strong></td>
<td><strong>material</strong></td>
<td><strong>package size (mm)</strong></td>
</tr>
<tr>
<td>1210 x 605 x 80</td>
<td>ABS</td>
<td>750 x 1210 x H2580</td>
</tr>
<tr>
<td><strong>weight (kg)</strong></td>
<td></td>
<td>204</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td><strong>No. pieces per pallet</strong></td>
<td></td>
<td><strong>No. handles</strong></td>
</tr>
<tr>
<td>38</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Further information on page 24*
<table>
<thead>
<tr>
<th>GEOPANEL INNER CORNER</th>
<th>GEOPANEL OUTER CORNER</th>
<th>GEOPANEL WP 18-21-27</th>
</tr>
</thead>
<tbody>
<tr>
<td>actual size (mm)</td>
<td>actual size (mm)</td>
<td>actual size (mm)</td>
</tr>
<tr>
<td>material</td>
<td>material</td>
<td>material</td>
</tr>
<tr>
<td>weight (kg)</td>
<td>weight (kg)</td>
<td>weight (kg)</td>
</tr>
<tr>
<td>package size (mm)</td>
<td>package size (mm)</td>
<td>package size (mm)</td>
</tr>
<tr>
<td>No. pieces per pallet</td>
<td>No. pieces per pallet</td>
<td>No. pieces per pallet</td>
</tr>
<tr>
<td>No. handles</td>
<td>No. handles</td>
<td>No. handles</td>
</tr>
</tbody>
</table>

**GEOPANEL INNER CORNER**
- Actual size (mm): 303 x 605 x 80
- Material: ABS
- Weight (kg): 4,03
- Package size (mm): 810 x 1210 x 2400
- No. pieces per pallet: 128
- No. handles: 5

**GEOPANEL OUTER CORNER**
- Actual size (mm): 252 x 605 x 80
- Material: ABS
- Weight (kg): 3,12
- Package size (mm): 800 x 1210 x 2300
- No. pieces per pallet: 130
- No. handles: 5

**GEOPANEL WP 18-21-27**
- Actual size (mm): 100 x 605 x 80
- Material: ABS
- Weight (kg): 1,5
- Package size (mm): 800 x 1200 x 2450
- No. pieces per pallet: 450
- No. handles: 4

**GEOPANEL CL 20 - 25 - 30**
- Actual size (mm): 460 x 605 x 80
- Material: ABS
- Weight (kg): 5,25
- Package size (mm): 750 x 1200 x 2500
- No. pieces per pallet: 91
- No. handles: 6

**GEOPANEL CL 35 - 40 - 45**
- Actual size (mm): 610 x 605 x 80
- Material: ABS
- Weight (kg): 6,28
- Package size (mm): 750 x 1200 x 2550
- No. pieces per pallet: 76
- No. handles: 7

**HANDLE**
- Material: NYLON
- Weight (kg): 0,1
- Package size (mm): 200 pcs. (bag)
- No. pieces per pallet: 5000
ACCESSORIES

**CAP 43**
- **Weight (kg):** 0,014
- **Material:** ABS

**CAP 25**
- **Weight (kg):** 0,101
- **Material:** PE HD

**ANCHOR NUT**
- **Weight (kg):** 0,370
- **Material:** NYLON

**LIFTING HOOK**
- **Weight (kg):** 2,13
- **Material:** STEEL

**BRACE CONNECTOR**
- **Weight (kg):** 0,30
- **Material:** STEEL

**CONNECTOR PLATE**
- **Weight (kg):** 0,85
- **Material:** STEEL

**SPACER**
- **Weight (kg):** 0,035 -> 0,070
- **Material:** PE HD

**TIE ROD**
- **Weight (kg):** 0,430 -> 2,150
- **Material:** STEEL

**ALIGNMENT BAR**
- **Weight (kg):** 2,60 -> 9,50
- **Material:** STEEL

**GEOPANEL ART**
- **Material:** ABS

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GEOPANEL INSTALLATION GUIDE

Handle locking

90°
FORMWORK
CORNER
CONFIGURATION

THICKNESS 100 mm
THICKNESS 150 mm
THICKNESS 200 mm
THICKNESS 250 mm
THICKNESS 300 mm
THICKNESS 350 mm
THICKNESS 400 mm
THICKNESS 450 mm

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Geoplast Technical Assistance

The Geoplast Technical Department ensures the necessary support at every stage of the construction. After analysing the specifications and design constraints of the project, our technical staff will design the most suitable formwork layout, also including any accessory items. If necessary, on-site assistance can be agreed upon to follow installation, pour and dismantling operations.

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The reusable panel for concrete walls

GEOPANEL WALLS

Geopanel System

GEOPANEL allows the production of walls of any thickness and height. The wide range of items and sizes meet any requirements. As the panels are made of plastic material (ABS), the concrete finish is extremely smooth and uniform, ensuring high quality. The panels are handled effortlessly as they are extremely light (max. 11 kg) making production fast even with a single worker.

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System suitable for use at high ambient temperature
Easy to handle on site, even without using cranes or other lifting devices
Excellent surface quality
GEOSKY

SLABS

Reusable ABS formwork for concrete slabs

Geopanel goes flat out

GEOSKY is a reusable roof slab formwork system which uses elements and a series of plastic supporting beams. The panels ensure a very good and consistent concrete surface quality. The plastic beams are designed to allow stripping of the concrete slab shortly after the pour, dramatically decreasing the turn-around time of the formwork thus allowing a much tighter pour schedule. The whole system rests on standard H2O timber beam.

ADVANTAGES

Advanced
dismantling
Modular
Safe

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Thanks to the access from below, GEOSKY allows safer working conditions, avoiding fall hazard from heights, during both set-up and dismantling. GEOSKY is suitable for the production of roof slabs for commercial, industrial and residential buildings.

<table>
<thead>
<tr>
<th>System items and shoring criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Y-BEAM</strong> Lodges onto standard H20 timber beams with WEDGES which allow the advanced dismantling of the formwork panels</td>
</tr>
<tr>
<td><strong>WEDGE</strong> This item allows the advanced dismantling. When detached from the Y-beam makes the removal of the panels possible</td>
</tr>
<tr>
<td><strong>H-BEAM</strong> Panel support element, it is one of the first elements to be removed during dismantling</td>
</tr>
<tr>
<td><strong>HS-BEAM</strong> Panel support element. Useful replacement of the HS-Beam in some formwork configuration</td>
</tr>
</tbody>
</table>

### SLAB THICKNESS

<table>
<thead>
<tr>
<th>Prop spacing</th>
<th>Up to 20 cm</th>
<th>Up to 25 cm</th>
<th>Up to 35 cm</th>
<th>Up to 40 cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>H2O Beam (a)</td>
<td>125 cm</td>
<td>125 cm</td>
<td>60 cm</td>
<td>60 cm</td>
</tr>
<tr>
<td>Props for Y-Beam + Wedge (b)</td>
<td>150 cm</td>
<td>100 cm</td>
<td>150 cm</td>
<td>100 cm</td>
</tr>
<tr>
<td>Props for H-Beam (c)</td>
<td>150 cm</td>
<td>150 cm</td>
<td>150 cm</td>
<td>150 cm</td>
</tr>
</tbody>
</table>

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Geopanel for technical rooms

- Reduced building time
- No lifting devices
- Numerous combinations

**GEOPANEL** system is ideal for the construction of stairwells and elevator shafts. The lightness and easier handling of the panels allow carpenters to speed up the setup and dismantling, giving them the possibility to repeat the operations quickly in the various floors of the building. The accessories included in the system make it easy to form corners and wall intersections without needing fill-in elements.

[www.geoplast.it](http://www.geoplast.it)
Geopanel
for safety

Easy to use
Simple logistics
Adaptable to the design requirements

Manual handling and easy set-up of the panels make it suitable for any type on-site requirement.
PLINTH & STRIP FOUNDATIONS

Geopanel
Back to basics

The GEOPANEL formwork system comes into its own when used as a foundation formwork. Its versatility and ease of use make it ideal as footing and plinth formwork, making the task really easy: no alteration, cutting or trimming is necessary and site waste is greatly reduced.

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Winners in renovation

GEOPANEL is light and of manageable size. These features make it the ideal formwork system for use inside buildings and in other areas of a construction site that are inaccessible to lifting devices. The modular panels will adapt to any size and shape and are ideal for lintels, ring beams and infill walls.
Reinforced concrete swimming pools

The versatility of GEOPANEL formwork is well suited to the construction of swimming pools. Infinite custom variations of size and shape can be produced using the large range of panels and accessories. GEOPANEL will work perfectly with the complex equipment of the pool. It is also possible to create sloping floors, thus creating diving areas and relax zones.

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Shear walls

Shear walls are built to counter the effects of lateral load such as wind or earthquakes acting on a structure. Easy to handle, GEOPANEL system is excellently suited for this type of application.
Geoplast Formwork Versatility

GEOPANEL panels are compatible with the GEOPANEL STAR range. GEOPLAST system’s modularity allows the construction of particular configurations such as columns integrated in concrete walls. It is thus possible to achieve this technical solution with a single pour.

Thanks to the new GEO-PANEL 35 panel, it is possible to expand the range of the configurations, building square (150 x 150 mm or 120 x 120 mm) and rectangular columns (150 x 120 mm).

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Large columns

In combination with GEOPANEL STAR elements, GEOPANEL is used to form large columns. The two panel systems work very well together as they share the same module. The standard GEOPLAST fixing handle makes the installation on site extremely intuitive, fast and safe.
OVAL COLUMNS

Geopanel & Geotub Ø25/30/35/40/45/50/60

The ideal solution for car parks

Most of the GEOPLAST formwork panels share the same module and different systems are compatible with one another. GEOPANEL and the GEOTUB circular column formwork work together very efficiently to produce elliptic columns. This is a very useful tool for the production of elliptic columns in multi-storey car parks, much appreciated for their slender looks and the better maneuvering space given to vehicles.
Governors, builders and individuals in developing countries are facing an exponential growth in demand for housing: it is therefore increasingly urgent to find a solution to build houses quickly and cost-effectively. Thanks to its lightness and maneuverability, GEOPANEL is the ideal solution to build customized buildings as social houses and terraced houses in a short time and at low costs. Not requiring the use of mechanical devices to handle it, GEOPANEL can be used and installed in every plot of land, even in the most inaccessible ones. To complete the construction of housing with a high value for money, we recommend GEoplast Modulo system to ventilate the foundations.

GEOPANEL | APPLICATIONS

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This is a reusable and modular high-resistance formwork panel used to create textured reinforced concrete walls. Made of ABS, GEOPANEL ART is used in combination with GEOPANEL. The two elements are assembled to create a high-productivity mold for the production of textured concrete. The concrete surface receives the decoration from the panels and the result is a wall ready to be painted or further decorated in order to achieve an even more realistic and creative look. Replicating the pebbles of a mountain stream, the River Stone panel is irregularly shaped to obtain a very “real looking” result.

Panels for textured walls

<table>
<thead>
<tr>
<th>actual size (mm)</th>
<th>material</th>
<th>weight (kg)</th>
<th>package size (mm)</th>
<th>No. pcs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1210 x 605 x 25</td>
<td>ABS</td>
<td>4.46</td>
<td>1200 x 750 x H2020</td>
<td>80</td>
</tr>
</tbody>
</table>

www.geoplast.it
GEOPANEL ART

ADVANTAGES

Simple and easy to use, GEOPANEL ART helps you save time and money. Results are immediate and no further action is needed on the decorated wall. Light and easy to handle, GEOPANEL ART is a product with an excellent benefit-cost ratio.

Immediate result
High quality concrete finish
Reusable
Customizable

How to assemble

GEOPANEL ART panels are clipped onto the GEOPANEL EL 120 x 60 cm panels using the tie rods holes as latching points. Standard tie rods and anchor nuts are used to hold them tightly in position. Plastic spaces sleeves are inserted between the panels and are lost after the concrete pour. The panels can be assembled in any combination without interrupting the decorative texture. GEOPANEL ART is easy to handle and can be simply dismantled from GEOPANEL panels after use. The forms can then be cleaned just with water.

ON REQUEST

Woodline
Prun
Wall
Line

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A) SHORING

The shoring is performed using a steel bracket to connect push-pull props to the formwork. The brackets are available in various sizes to suit any commercially available props.

B) GROUND ANCHORING

Anchoring to the ground to stabilise the formwork is simply done using timber.
OPERATION AND MAINTENANCE REQUIREMENTS

POUR
Only immersion concrete vibrators are allowed. ABS formworks are not fireproof, so do not place them close to hot objects or open flame.

HANDLING
Use lifting clamp to lift the already assembled panels with a crane. Before lifting, make sure that the lifting cables have an uniform draft.

PANEL CLEANSING
After every use, cleanse the panels with water (preferably with a pressure washer). Any deposit of concrete should be removed with a spatula or a wire brush.

RELEASING AGENT
As long as the contact surface of the panels shows no signs of wear, no releasing agent is required.

STORAGE
In order to facilitate the handling and lifting of the panels and all accessories, store them on pallets or battens to keep them off the ground. Although the product does not suffer weathering, it is preferable to store the panels in a dry place away from direct sunlight.

RATE OF RISE DIAGRAM

SAFETY REQUIREMENTS

The operations of positioning, assembling, dismantling, plumbing, handling and cleaning of GEOPANEL products, as well as the pouring of the concrete, must be carried out by competent and properly trained personal or under supervision of the site manager or a Technician of Geoplast S.p.A., who must ensure that:

- All above mentioned operations are carried out properly,
- Every person working with the formworks is equipped with suitable tools and personal protective equipment to perform all necessary actions in full compliance of the safety standards,
- All panels and the supplied accessories are checked before use, discarding those which should not meet the minimum standard of reliability and safety because of the presence of any breachage and/or deformation,
- The formwork is installed on a perfectly flat surface, so as to work safely and ensure a perfect shoring and plumbing,
- All connection, alignment and plumb accessories of the formworks are properly tightened and secured to the ground before starting the pour.

Geoplast S.p.A. disclaims any liability or responsibility arising from improper use of GEOPANEL formwork. Any assembly of molds and/or use of accessories otherwise described in these guidelines must first be approved by Geoplast S.p.A.