PIONEERS OF
SANDWICH PANEL TECHNOLOGY

LIGHT
STRONG
CLEAN

PANELTIM®

PANELTIM® PIONEER IN SANDWICH PANELS

Paneltim® panels produced by specialists, for specialists.

Paneltim NV is a family-owned company in Lichtervelde (Belgium) which processes thermoplastics for the **production of sandwich construction panels** and slats. Paneltim is the world's independent market leader in plastic sandwich panels made by injection and mirror welding.

Various techniques are used for the production of the plastic sandwich panels, namely: high-pressure injecting (1600, 1850, 3000 and 4000 tons clamping force), mirror welding, cutting and CNC controlled milling.

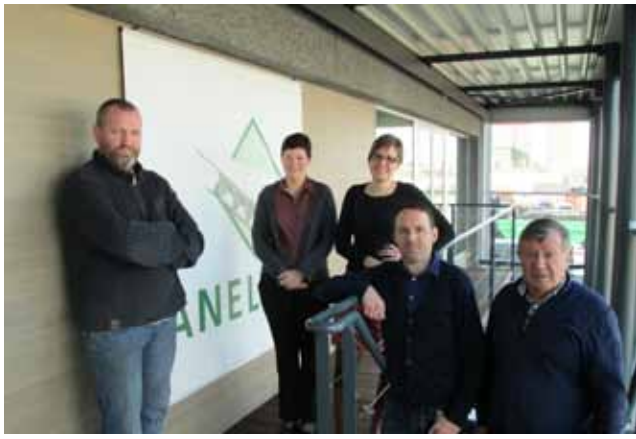
In the construction sector, the panels are used to build plastic rectangular liquid tanks, filters for liquids, swimming pools, heat exchange units, air scrubbers, odor filters and numerous other applications.

The polypropylene and polyethylene sandwich panels are **lighter** and **stronger** than most other plastic construction panels, they are **resistant** to most chemicals and they can be welded very easily. **This makes them highly suitable for constructions that are required to be light, strong and clean.**

Our daily challenge is to **innovate, in order to optimize the quality and to search product possibilities** together with our customers.

Through our global network, we challenge and assist our customers in diverse sectors to develop as many strong and innovative applications as possible.

PANELTIM®
WWW.PANELTIM.COM
Plastic panels and slats



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PANELTIM® SANDWICH PANEL IN PP OR PE

Welding constructions
Paneltim® panels are made from polypropylene copolymer (PPCO) or high density polyethylene (PEHD), coloured in the mass. The panels are light, solid, rigid and very suitable for constructions by different welding techniques.

Sandwich structure
The panels are 50, 35 and 20mm thick and have a sandwich structure. They are very solid in both directions: length and width, due to the unique internal cell structure with ribs by 50/50 mm or by 50/100 mm.

Less reinforcements
Due to the superior strength of the concept of a sandwich panel, constructions made from Paneltim® construction panels require less reinforcements compared with those made from solid panels.

Easy manipulation
Standard Paneltim® panels can be cut and made into any dimension by hot mirror welding. Next to hot mirror welding, the panels are easy to connect using hot air or extrusion welders to make all kinds of constructions.

Features
Paneltim® panels assure excellent mechanical features and good chemical features for certain applications. They have a good impact resistance and are highly resistant to dynamic shocks.

Insulation
The panels have a high insulation value due to the low thermal conduction of plastic and the hermetically enclosed air in the cells.

Hygienic
The internal cell structure ensures that all the sides of the panel are always closed (even with customised work) in order to repel dirt, water or other substances. The panels can be cleaned quickly and easily with high pressure water.

Ecological
Paneltim® panels are made from new or recycled raw materials. They are 100% recyclable, so there is no loss of raw material value. The panels are toxic free and are conform to European directive 2002/95/EC.

Fire class
According to EN ISO 11925-2, the panels are classified under fire class E. Upon request the panels can have improved fire retardant resistance through the addition of flame retardants.

Options
Options are subject to the addition of additives:
- Stabilised with UV:
  - Mid-European (Standard)
  - Worldwide (WW)
- Flame retardant (PPFR).
- Fibreglass reinforced
- ...

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PANELTIM® MULTIPOWERED PANEL 50MM

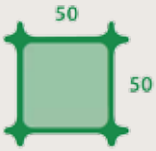
50/50

PP

HDPE

◆ **Material:**
- PP COPO
- PEHD

◆ **Internal structure:**
- 50/50mm



◆ **Standard dimensions:**
- 2600 x 1000 x 50mm

◆ **Weight:**
- PP: ± 13kg/m²
- PEHD: ± 14 kg/m²

◆ **First internal rib on 25mm from outer edge**
- Low dropout by mirror welding (2%)
- Good symmetric welding
- Short welding cycle times (± 1,5 min/cycle)

PP prime

UV beige (RAL 7032)

UV white (RAL 9010)

PP near to prime

Light grey (RAL 7001, non UV)

PE prime

UV white (RAL 9010)

Black

Other colours are available on demand.
Dark colours are not recommended for outside use.
For construction and structural applications, Paneltim strongly advises prime material. Please also note that technical datasheets are only available for panels in prime material.

The Paneltim® Multipowered panel is the strongest and most robust of our cross-ribbed sandwich panel range. Like its lighter counterparts, it is easy to process into plastic constructions using a butt welder, hot air or extrusion welding machines. As it is made of prime polypropylene or polyethylene, it can be welded together with other PP or PE materials such as solid sheets, pipes, etc.

The Multipowered panel's first internal rib is located at 25mm from the outer edge of the panel; this assures a low dropout by mirror welding (2%) and short welding cycle times.

Thanks to the internal cell structure of 50x50mm, the panel has excellent mechanical features in both its length and width.

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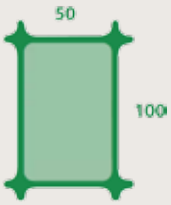
EXTENDED PRODUCT RANGE
50/100 SANDWICH PANELS

- **Smooth surface, wall thickness 3.5mm**
- **Cell structure**
  - 50/100mm
- **Standard dimensions 50mm**
  - 2600x1000 mm
  - 1200x1000 mm
  - 1200x800 mm
- **Standard dimensions 20 and 35mm**
  - 1200x1000 mm
  - 1200x800 mm



PP prime
UV beige (RAL 7032) | UV white (RAL 9010)

PP near to prime
Light grey (RAL 7001) | White (RAL 9010)
Blue (RAL 5002)

PP recycled
Light green | Black

PE prime
UV white (RAL 9010) | Black

Other colours are available on demand.
Dark colours are not recommended for outside use.
For construction and structural applications, Paneltim strongly advises prime material. Please also note that technical datasheets are only available for panels in prime material.

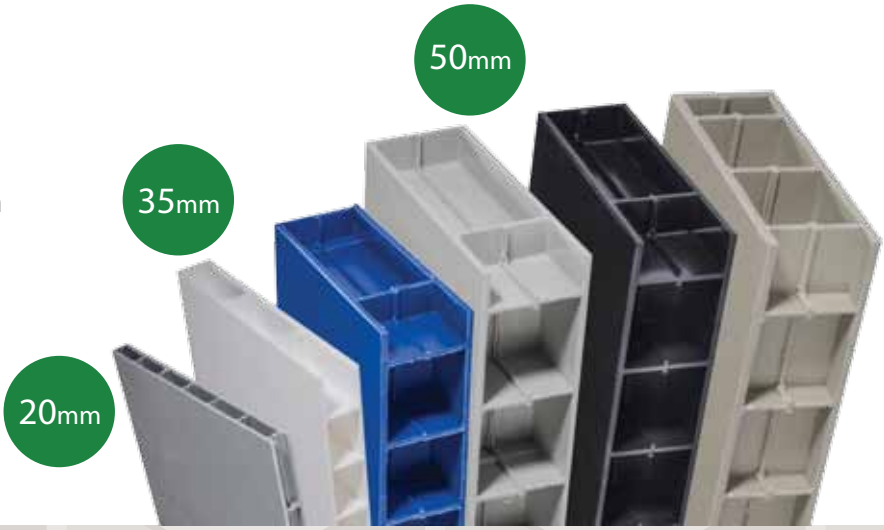
Thanks to the wide range of thicknesses and structures, Paneltim® can offer a solution for any application, answering to your specific wishes.

We are proud to present two novelties which unlock interesting perspectives for new applications:

- Paneltim® panel 20mm
- Paneltim® panel 35mm

These hygienic plastic panels preserve the advantages of the 50mm panels, but they are lighter and thinner, thus saving space. Though they are thinner, they have surprising characteristics on stiffness and bending.

Strength comparisons are available on request.



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PANELTIM® LIGHTWEIGHT PANEL 50MM

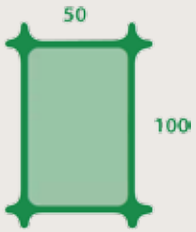
50/100

PP

HDPE

◆ **Material:**
- PP COPO
- PEHD

◆ **Internal structure:**
- 50/100mm



◆ **Standard dimensions:**
- 2600 x 1000 x 50mm
- 1200 x 1000 x 50mm
- 1200 x 800 x 50mm

◆ **Weight:**
- PP: ± 10 kg/m²
- PEHD: ± 11 kg/m²

PP prime
UV beige (RAL 7032) | UV white (RAL 9010)

PP near to prime
Light grey (RAL 7001) | White (RAL 9010)
Blue (RAL 5002)

PP recycled
Light green | Black

PE prime
UV white (RAL 9010) | Black

PPFR prime
Light grey (RAL 7037)

Other colours are available on demand.
Dark colours are not recommended for outside use.
For construction and structural applications, Paneltim strongly advises prime material. Please also note that technical datasheets are only available for panels in prime material.

The Paneltim® Lightweight cross-ribbed sandwich panel has an internal cell structure of 50mm x 100mm. This creates a light but strong panel that is easy to process into constructions such as air scrubbers, air ducts, doors, etc. As it is made of prime polypropylene or polyethylene, it can be welded together with other PP or PE materials such as solid sheets, pipes, etc. Just like the other sandwich panels in the Paneltim® product range, lightweight panels have very short butt welding cycle times, which reduces processing time in the workshop.

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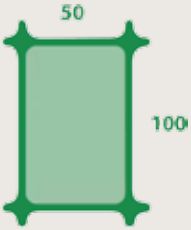
PANELTIM® LIGHTWEIGHT PANEL 35MM

50/100

◆ Material:
- PP COPO
- PEHD

◆ Internal structure:
- 50/100mm



◆ Standard dimensions:
- 1200 x 1000 x 35mm
- 1200 x 800 x 35mm

◆ Weight:
- PP: ± 8,75 kg/m²
- PEHD: ± 9 kg/m²

PP prime
- UV beige (RAL 7032)
- UV white (RAL 9010)

PP near to prime
- Light grey (RAL 7001)
- White (RAL 9010)
- Blue (RAL 5002)

PP recycled
- Light green
- Black

PE prime
- UV white (RAL 9010)
- Black

Other colours are available on demand.
Dark colours are not recommended for outside use.
For construction and structural applications, Paneltim strongly advises prime material. Please also note that technical datasheets are only available for panels in prime material.

The 35mm lightweight panel, with a 50x100mm internal cell structure, is both lighter and thinner than the panels with a thickness of 50mm. As such, it can be used to save space and build lighter constructions that don't need to bear extreme pressure. Consisting of 100% polyethylene or polypropylene , the 35mm panel is just as easy to process as its thicker variety, and although it is thinner and lighter, it preserves surprising characteristics in terms of stiffness and bending.



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PANELTIM®

PANELTIM® LIGHTWEIGHT PANEL 20MM

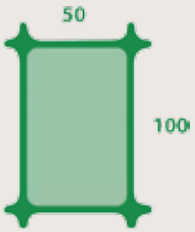
50/100

PP

HDPE

◆ **Material:**
- PP COPO
- PEHD

◆ **Internal structure:**
- 50/100mm



◆ **Standard dimensions:**
- 1200 x 1000 x 20mm
- 1200 x 800 x 20mm

◆ **Weight:**
- PP: ± 7,5 kg/m²
- PEHD: ± 8 kg/m²

PP prime
- UV beige (RAL 7032)
- UV white (RAL 9010)

PP near to prime
- Light grey 3(RAL
- Blue
- White (RAL 9010)

PP recycled
- Light green
- Black

PE prime
- UV white (RAL 9010)
- Black

Other colours are available on demand.
Dark colours are not recommended for outside use.
For construction and structural applications, Paneltim strongly advises prime material. Please also note that technical datasheets are only available for panels in prime material.

The 20mm lightweight panel, with a 50x100mm internal cell structure, is our lightest and thinnest cross-ribbed sandwich panel. As such, it can be used to save space and build lighter constructions that don't need to bear extreme pressure. Consisting of 100% polyethylene or polypropylene , the 35mm panel is just as easy to process as its thicker variety, and although it is thinner and lighter, it preserves surprising characteristics in terms of stiffness and bending. This makes the panel very suitable for use in walls, doors, ceilings etc.

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PANELTIM® ANTISKID PANELS 50MM

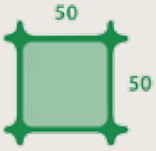
50/50

◆ Material:
- PP COPO
- PEHD

PP

HDPE

◆ Internal structure:
- 50/50mm



◆ Standard dimensions:
- 1200 x 1000 x 50mm

◆ Weight:
- PP: ± 14,5 kg/m²
- PEHD: ± 15,5 kg/m²

◆ Antiskid structure:
- Checkerplate
- Studs

Distance of antiskid structure to edge: 40mm

PP prime

UV beige (RAL 7032)

PP recycled

Black

PE prime

UV white (RAL 9010) Black

Other colours are available on demand.
Dark colours are not recommended for outside use.
For construction and structural applications, Paneltim strongly advises prime material. Please also note that technical datasheets are only available for panels in prime material.

Paneltim®'s panel range includes two varieties of antiskid panels with a reinforced 50x50mm internal cell structure: a checkerplate and stud antiskid structure. Both are available in polyethylene and polypropylene and can be processed just as easily as other Paneltim® panels, using a buttwelder, hot air or extrusion welding machine. Thanks to their 50x50mm internal cell structure, they can bear heavy point loads; as such, they can be used as antiskid floor elements in various applications.

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PANELTIM® PLUS SLATS IN PP COPO

PP

- **Material** : PP Copo
- **Height:**
  50mm, 15mm above the supports
- **Dimensions :**

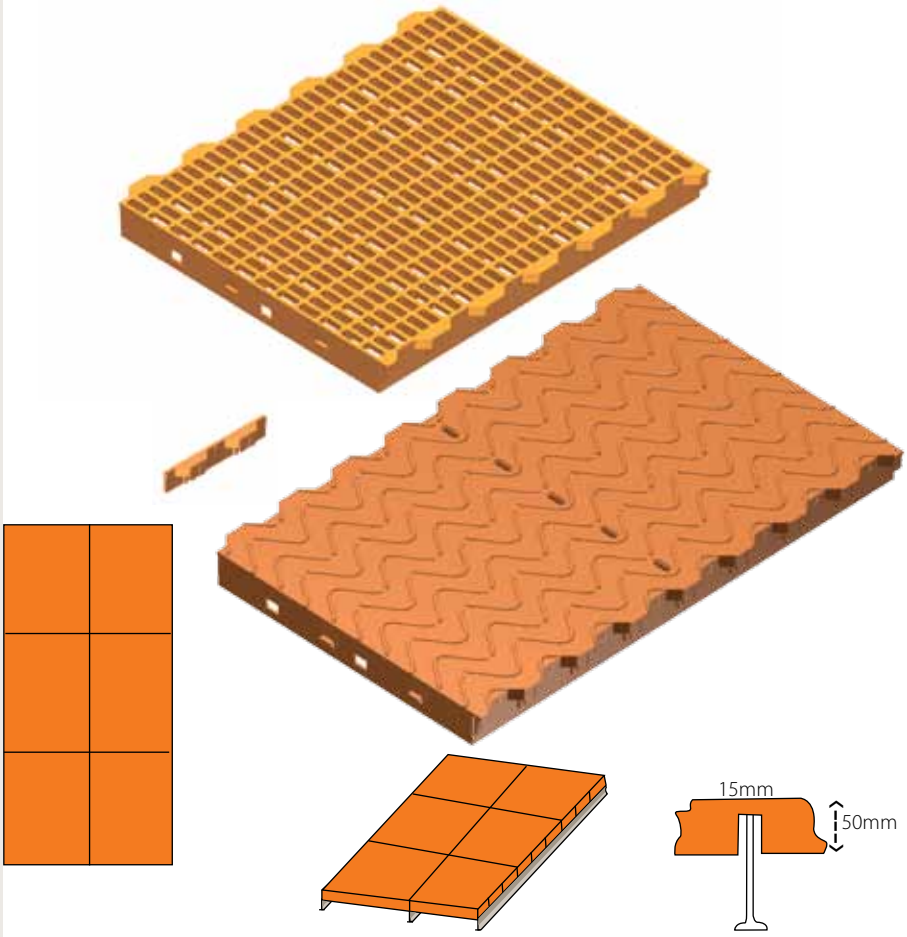
PLUS open slat
- 200 x 400 mm
- 300 x 400 mm
- 600 x 400 mm
- 300 x 600 mm
- 200 x 500 mm
- 600 x 500 mm

PLUS closed slat
- 200 x 400 mm
- 200 x 500 mm
- 800 x 500 mm

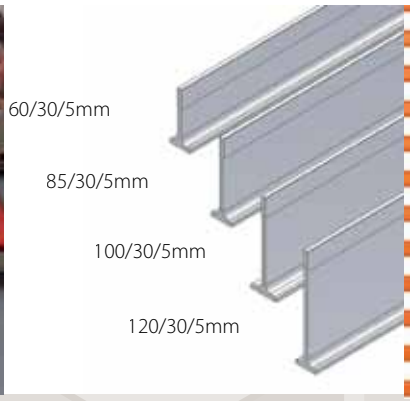
Edge seal strip: 200 mm

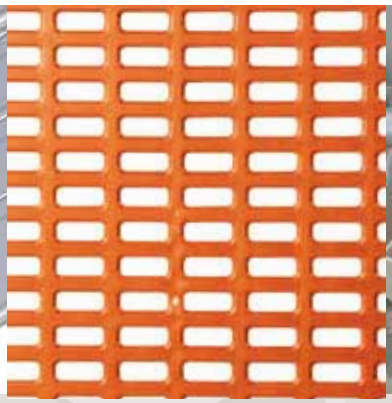
- **Openings:** 28.1 x 10.9mm
- **Weight** : 7 kg/m²
- **Colour** : Orange, RAL2009
- **Supports :**

60/30/5 mm: up to 1200 mm
85/30/5 mm: up to 1700 mm
100/30/5 mm: up to 2000 mm
120/30/5 mm: up to 2400 mm



Paneltim® Plus slats are resistant to almost all chemical substances. They are corrosion-proof and have a high resistance against dynamic shocks and point loads. As such, they can be used in various constructions such as filters.
Paneltim® Plus slats have an ingenious self-anchorage hook system, allowing an easy modular installation. Self-supporting spans are possible in combination with fibreglass support profiles.





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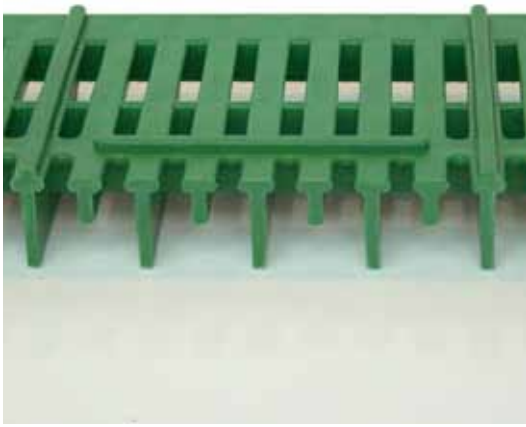
PANELTIM®

PANELTIM® DELTA SENIOR SLATS

- **Material:** PP COPO
- **Plastic height:** 25mm
- **Dimensions:**
  - 1200 x 400mm
  - 1500 x 400mm
  - 1600 x 400mm
- **Weight:** 12,25kg/m²
- **Colour** : green

The Paneltim® Delta Senior slat is made out of polypropylene and is resistant to wear and ageing. The slat is shock and corrosion proof, resistant to most chemical substances and disinfectants, and has a highly permeable surface structure, which makes it suitable for use in filters or scrubbers, for instance.

The Paneltim® Delta Senior slats are easy to fit and are connected along the side via a functional hinging hook system.



WELDING ROD

Paneltim® construction panels are suitable for all types of welding rod.
PP Copo and HDPE welding rod can be provided by Paneltim.

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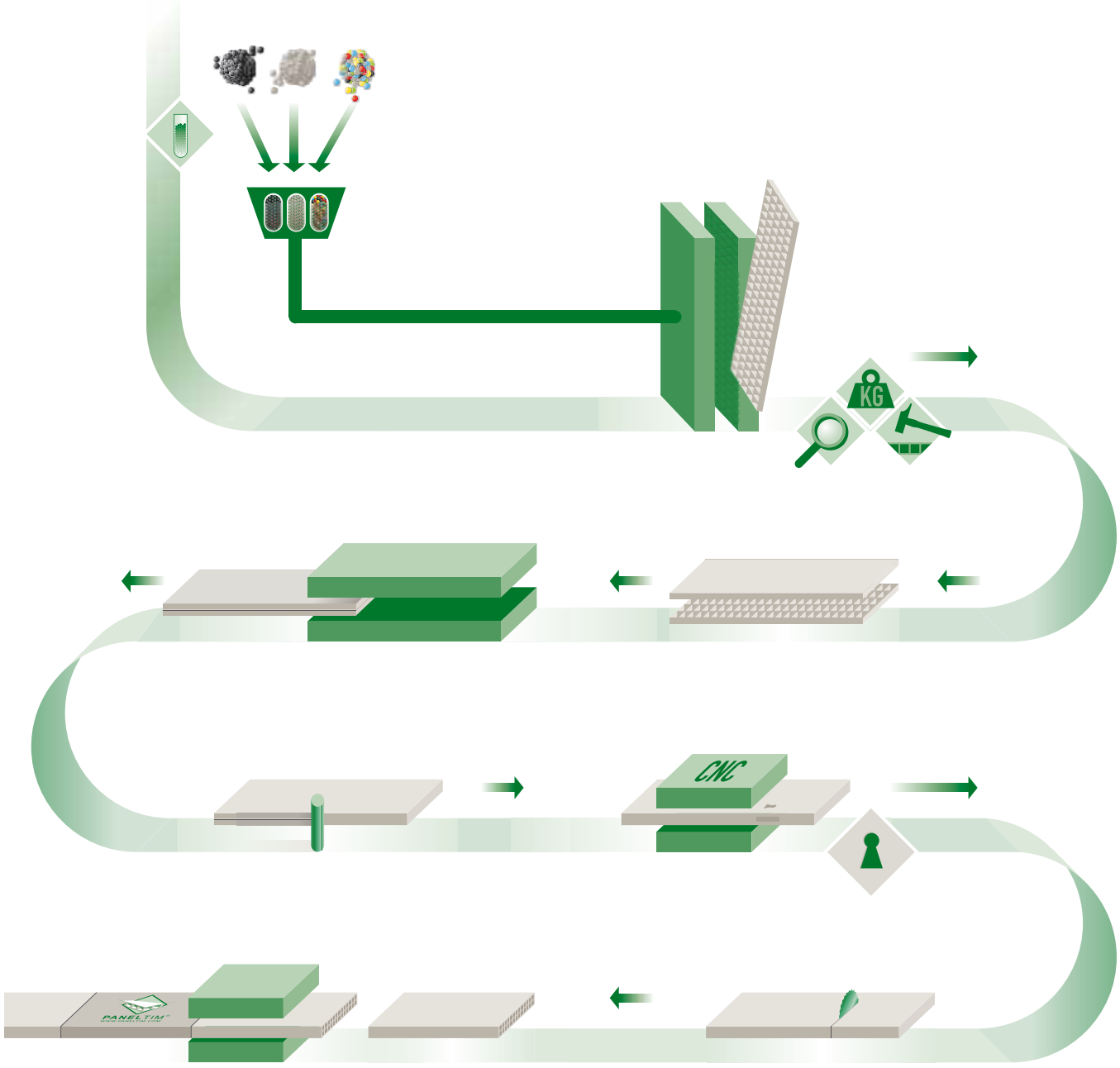
PANELTIM® PRODUCTION PROCESS

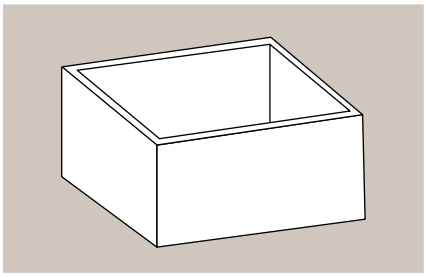


PANELTIM® PROCESSING GUIDELINES

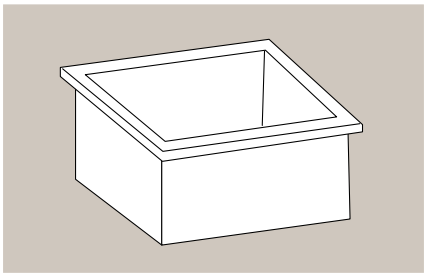
Technical data
For each prime product we provide a technical data sheet with product details. Processing guidelines regarding welding instructions and environmental factors can be provided on request.

PanTanC sofware (Paneltim® Tank Calculation)
Paneltim® construction panels are very suitable for the construction of rectangular tanks. For the calculation of the constructions with Paneltim® panels, we developed the «PanTanC 2.0» software. Taken into account the sandwich construction, the light weight and the fact that constructions require less reinforcements compared with traditional massive panels, «PanTanC 2.0» offers you a preliminary report with all necessary reinforcements for your free-standing rectangular tank above ground. «PanTanC 2.0» is based on the DVS 2205-5 regulations.

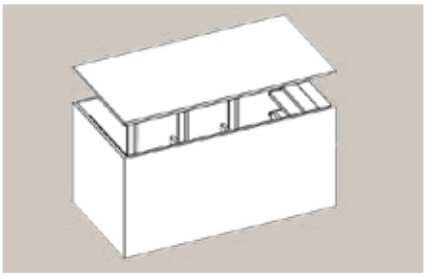
WITHOUT STRENGTHENING



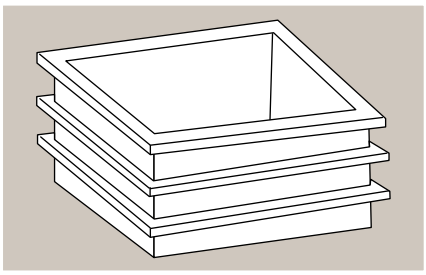
EDGE STRENGTHENING



INTERNAL STRENGTHENING



ALL AROUND STRENGTHENING



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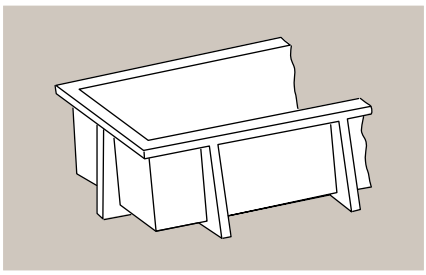

PANTANC 2.0

Paneltim® engineering consultant
For specific questions, Paneltim NV can introduce you to its laboratory and/or engineering consultant.

Control
Paneltim NV built up 20 years of experience in producing and welding sandwich panels. During these years we established a thorough know-how about plastics, welding processes and high-tech production equipment. We ensure total quality control during the production process via MFI stipulations, density, DSC scan, tensile and proof tests on the supplied raw materials. The production process has been designed specifically for the manufacture of Paneltim® panels.

Flexibility
Paneltim NV ensures flexibility by controlling its own injection moulding division: panels in non-standard RAL colours are available, subject to a minimum quantity. Additives can be added to the raw material on request. We have a big stock which results in a short delivery time.

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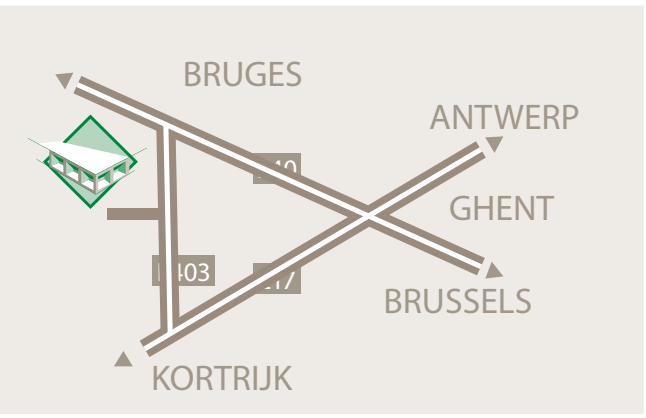

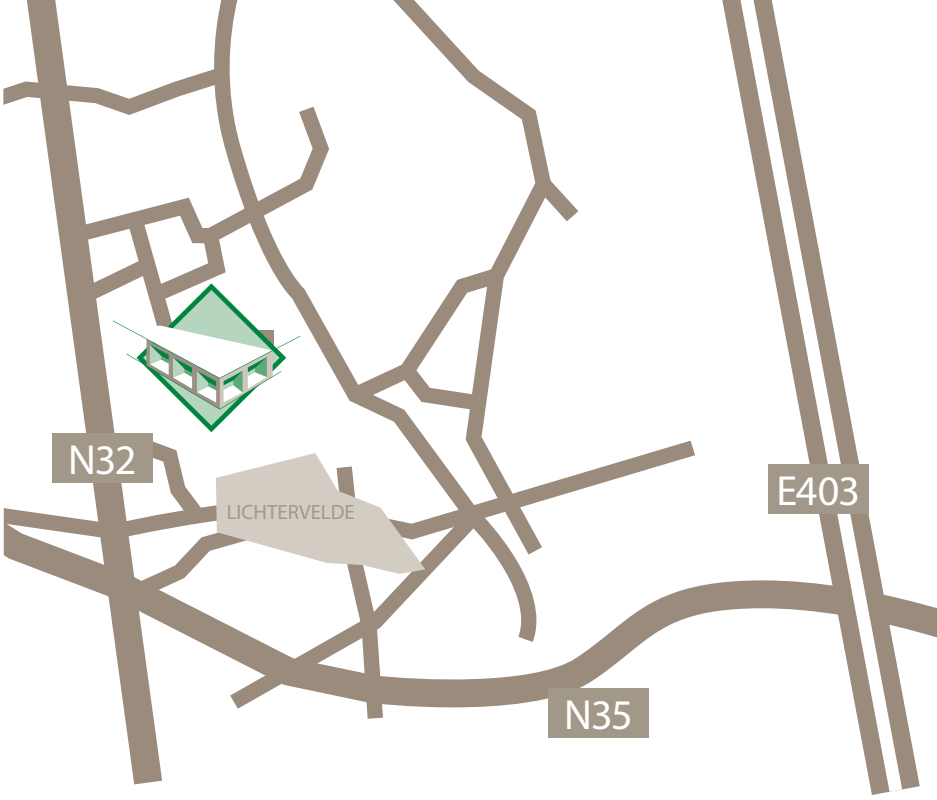

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THE PIONEER IN PLASTIC SANDWICH PANELS