



hanit **SYSTEM**

Industrial product developments
made from recycled plastic

www.hanit.eco



Working
together
on your
project



Figures & data

– at a glance

Head office

Germany

Employees 2025

500
worldwide

Germany

400

Internationally

100

Turnover 2023

71,0
million euros

Sites

7
countries



Company size

220,000

sq m

Established

1993

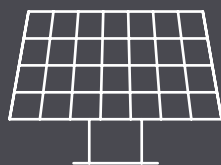
Products

approx.

2,000

in three categories

● Reducing emissions



DIN EN ISO 50001

Certified energy management

● Protecting the environment



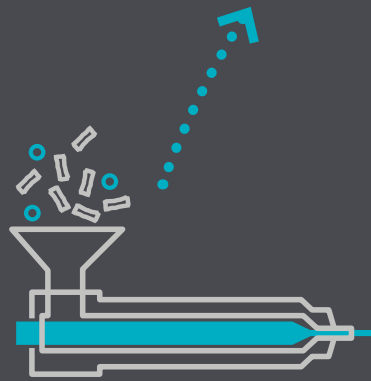
DIN EN ISO 14001

Certified environmental management



This is how we create our **innovative** products.

When one day they're no longer being used, they can easily be **recycled** – and the cycle starts anew.



The pellets are melted and injected into moulds.



We use the bales to make pellets – our recyclable material **hanit**.



The plastic packaging is compacted into bales and delivered to **HAHN Kunststoffe**.





It all starts in private households.
Here the packaging is put into recycling bins...

Using mixed plastics with know-how



... or collected in yellow bags.



The contents are driven to sorting plants.

Who and what is hanit

hanit combines the manufacture and development of practical products with the 100% recycling of used plastics. To this end, we utilise waste that is disposed of via the collections of the dual systems in households and industry.

For us, post-consumer material forms the basis of our value chain and can be found in the yellow bags and bins of each and every one of us.



Here the packaging is separated into raw materials (e.g. tinplate and plastics). Unsuitable leftover materials are discarded.

Benefits at a glance

Sustainable and innovative products

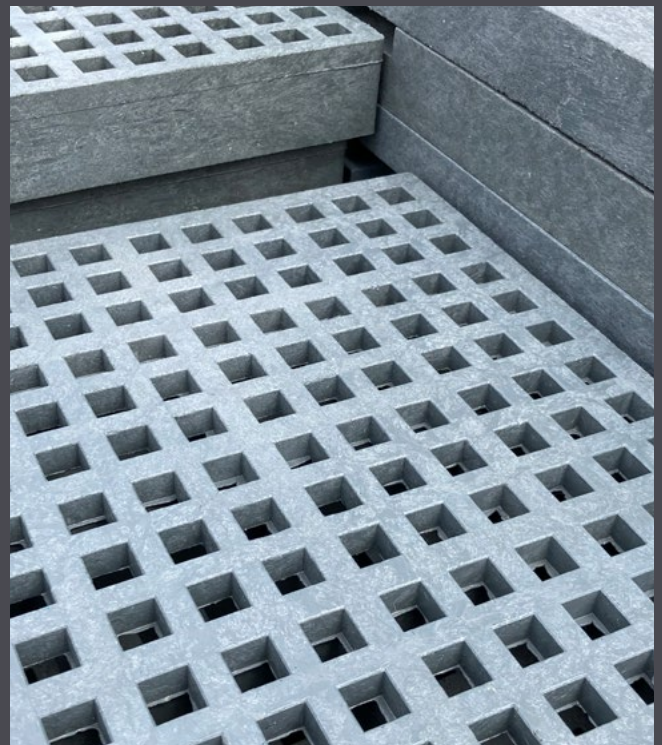
From individual products to complex complete solutions

Industrial development requires constant innovation. Thanks to its excellent cost-benefit ratio, our hanit material is increasingly replacing wood, metal, concrete and primary plastics.

Our hanit products have already positively surprised many designers and offer a number of advantages. The hanit material consists of secondary plastics, to be exact polyolefin blends. The main components of these blends are polyethylene (LDPE/HDPE) and polypropylene (PP). By using these high-quality, processed secondary raw materials (material purity > 95%), cost-intensive new material is replaced and raw material resources and the environment are conserved.

Profiles, finished parts and systems made from hanit are often technically and economically advantageous, particularly in industries where robust, thick-walled and particularly durable product solutions are increasingly required. hanit products are primarily characterised by their resistance to oils, alkalis, acids, salt water, microorganisms and their stability and break resistance. They are mechanically easy to process and maintenance-free.

Our raw material – hanit pellets
– made from perishable
packaging materials



hanit is used to make a wide range of around 2,000 products. We are happy to send you additional themed brochures with even more intriguing products.

A strong performance

Our product advantages



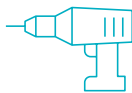
Material resistance

- Weather-resistant, weatherproof
- Rot-proof, splinter-free, low risk of injury
- Can be used all year round



Lightweight

- Installation without heavy equipment
- Faster assembly
- Lower transport costs: compared to concrete
- Lower workload



Easy processing

- Mechanically easy to work with (drilling, sawing, screwing, nailing)
- Simple on-site customisation possible



Economical

- Long service life
- Maintenance-free, no upkeep costs
- Made from high-quality recycled secondary plastics (polyolefins)
- Very good quality/price ratio
- Ideal construction material, particularly for robust profiles and finished parts



Eco-friendly

- Manufactured without impregnation
- Relief for landfill sites: sustainably environmentally friendly
- Recyclable in the material cycle
- Does not react with water
- Pollutant-free (in accordance with soil protection regulations)



Material properties

- Electrically non-conductive
- Fire behaviour: Fire class B2 (DIN 4102)
- Pressure-resistant
- The density is approx. 0.93 g/cm³
- Thermal conductivity: insulation. The thermal conductivity value is approx. 0.23 [W/mK].
- Continuous service temperature: -20 to +50 °C
- Waterproof (hydrophobic)
- Resistant to oils, alkalis, acids and salt water
- Resistant to micro-organisms
- UV-resistant
- High resistance to breakage
- Material is imbued



Durably functional

Technical data at a glance			hanit ductile	hanit robust
Examination for:	Standard DIN EN ISO	Unit	Measured value	Measured value
Tensile modulus of elasticity	527-2	[N/mm ²]	659	957
Breaking stress	527-2	[N/mm ²]	9.65	9.36
Elongation at break	527-2	%	13.8	3.7
Tensile strength	527-2	[N/mm ²]	9.65	9.36
Tensile elongation	527-2	%	13.8	3.7
Flexural modulus of elasticity	178	[N/mm ²]	581	890
Bending stress at 3.5% edge fibre elongation	178	[N/mm ²]	11.6	15.2
Bending stress at F _{max}	178	[N/mm ²]	15.1	18.0

Our process technologies

○ Extrusion

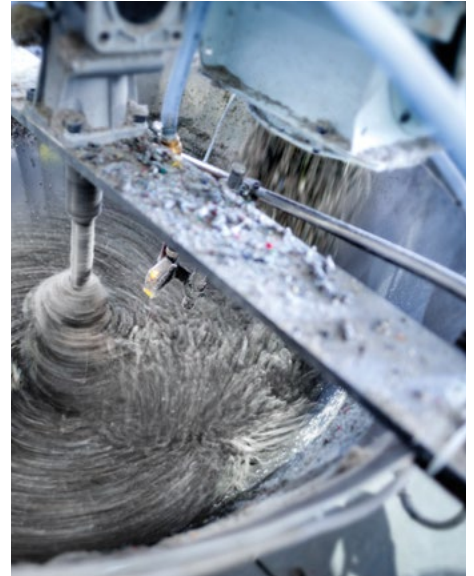
During extrusion, the plasticised mass (melt) is continuously processed by means of profile nozzles (tools) into semi-finished products.

○ The injection moulding process

This process can be used to economically produce thin-walled moulded parts in large quantities. The difference between extrusion and injection moulding is that a finished part "comes out" discontinuously during injection moulding, whereas during extrusion semi-finished products such as rods, planks and sheets are produced continuously.

○ Intrusion

The intrusion process is a combination of extrusion and injection moulding. The processed agglomerates are plasticised, filled into mould cavities and then cooled until they solidify. Depending on the mould cavity, divided or undivided, the product is ejected or removed manually. Different products with shot weights of 5 to 200 kg are created using the intrusion process.





Processing tips

This is the best way to do it

hanit products can be processed with conventional tools and machines used in wood and metal processing. Due to the material's properties, however, some special features need to be observed.



Nailing

hanit products can be nailed conventionally as well as with nailing tools. Due to their compact surface, however, penetrating the profiles is more difficult than with wood. Please bear this in mind when fixing.



Hammering

If profiles are hammered in, we recommend using a pile driver or edge protector to avoid damaging the product.



Length changes

Boards, sleepers and square-edged profiles must not be press-fitted. The profiles may exhibit temperature-related length fluctuations of +/- 1.5%. As a result, an expansion gap (expansion joint) must be maintained during installation.



Screwing

If recycled profiles are to be screwed together, the profile to be fastened must be pre-drilled (e.g. boards, planks, square profiles). The drill hole must be larger than the screw and elongated holes are recommended in order to take into account the material's temperature-related expansion behaviour.



Alignment

Solar radiation affects profile alignment and may, for instance, cause fence posts to lean.



Support spacing

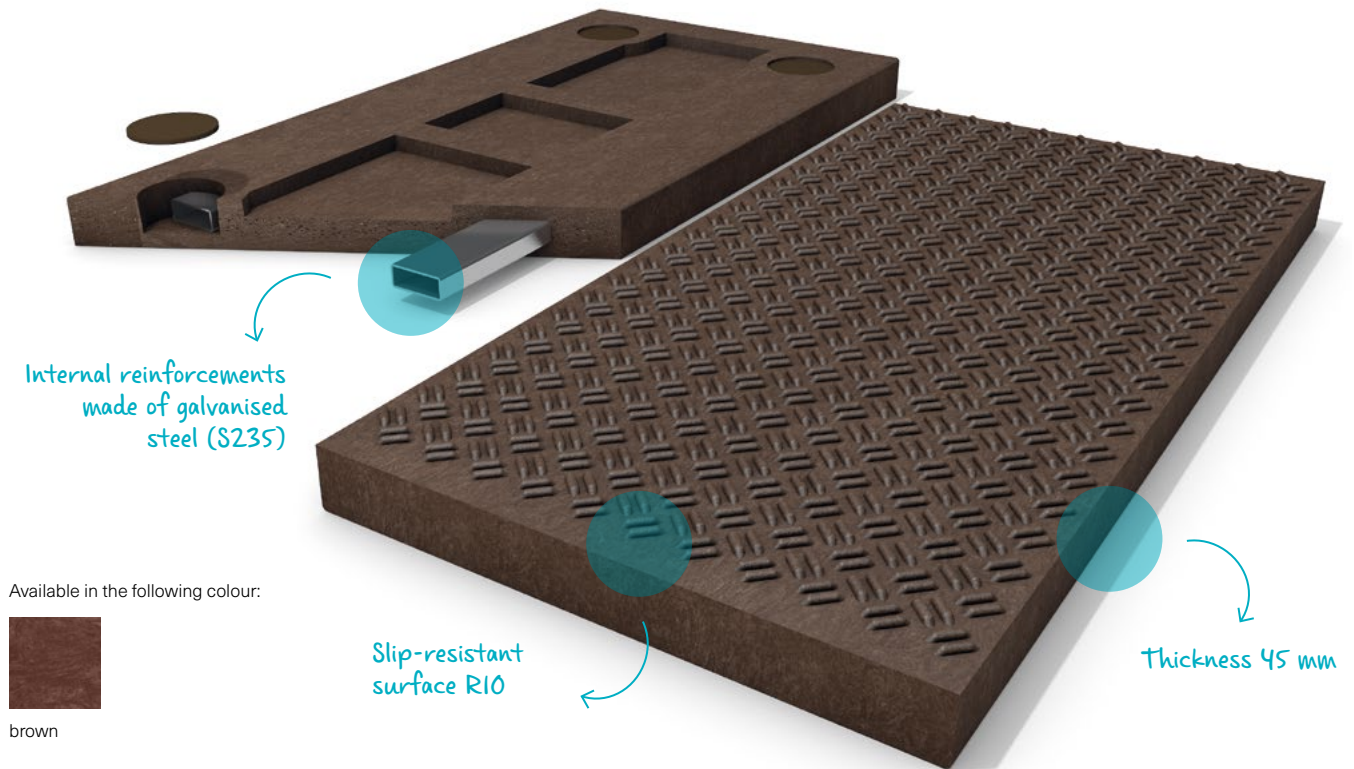
In contrast to timber or metal products, plastic is less rigid and more flexible. These special material properties must be taken into account for support spacing for profiles.

List of products

- Trench cover 10
- Cable duct 14
- Tunnel blocks 16
- Container plate 18
- Biofilter raised flooring system 20
- Cable protection plate 23
- Wedged dunnage 23
- Customised product solutions 24

Trench cover

Walk-on version



Available in the following colour:



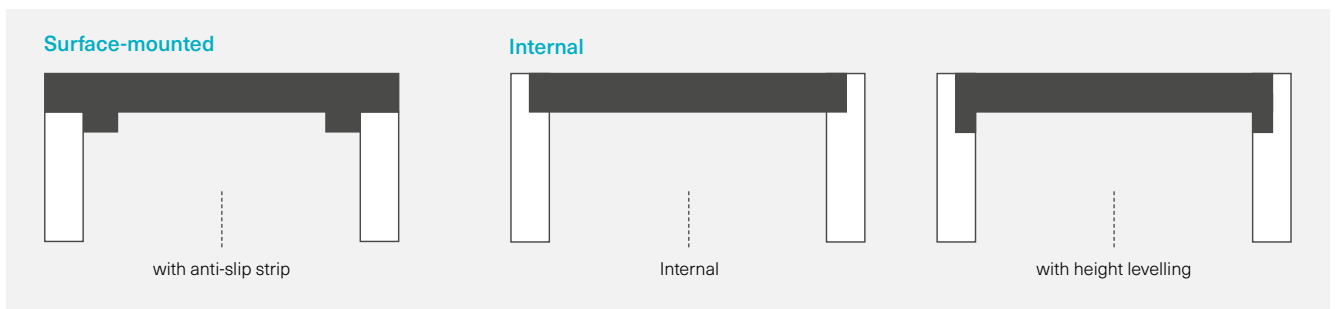
brown

Product information

- Electrically non-conductive
- Weather-resistant and frost-proof
- Acid and alkali resistant
- No product maintenance required
- Variety of designs and special constructions
- Easy to customise on site, can be machined like wood
- Slip resistance R10 V10, DIN 51130

Product dimensions

- Thickness: 45 mm
- Width: 400 mm, max. length: 1,900 mm
- Length up to 1,600 mm, 2-fold reinforced (50 × 20 × 2 mm)
- Length 1,600 to 1,900 mm, 3-fold reinforced (50 × 20 × 3 mm)
- Weight,
without reinforcement: 42 kg/qm
with 2-fold reinforcement: 48 kg/qm
with 3-fold reinforcement: 62.5 kg/qm





Trench cover

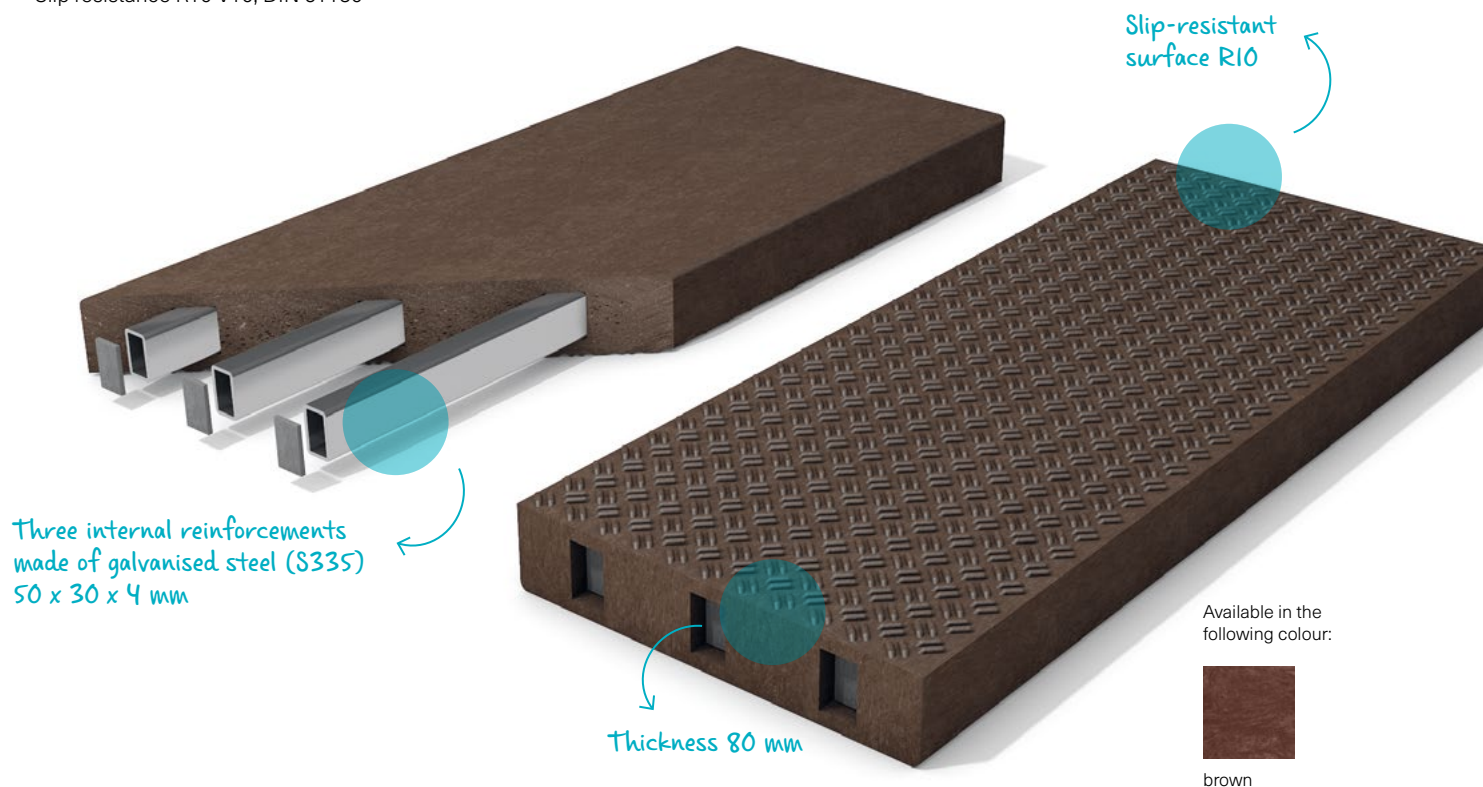
Drive-on version

Product information

- Electrically non-conductive
- Weather-resistant and frost-proof
- Acid and alkali resistant
- No product maintenance required
- Variety of designs and special constructions
- Easy to customise on site, can be machined like wood
- Slip resistance R10 V10, DIN 51130

Product dimensions

- Thickness: 80 mm
- Width: 400 mm, max. length: 1,600 mm
- Weight, with 3-fold reinforcement: 105 kg/qm



The trench cover

Processing & installation instructions



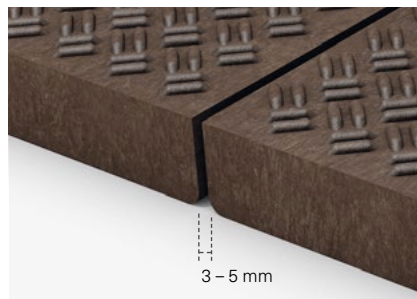
Please note the position of the reinforcements! Do not cut through the reinforcement.

The shim plate – subsequent reinforcement

Shim processing:
We recommend the use of shims for trapezoidal, curved and corner designs. These have two special features compared to standard trench cover: They are manufactured without internal reinforcement, but with a lateral rebate for subsequent installation of a supplied metal bracket.

Note the installation distance!

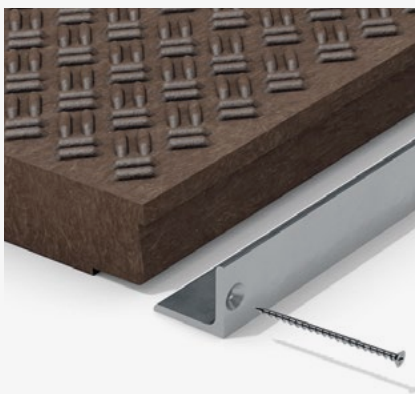
Our tip!



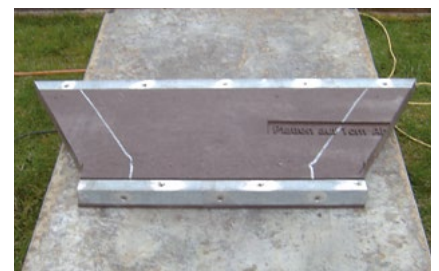
Installation distance: 3 – 5 mm



Our tip: use a folding rule as a spacer.



Tools for processing a shim plate.



Trimmed and subsequently reinforced shim plate.

Ask for our complete assembly instructions.



Installation steps for a 90° junction



1 Application example: 90° corner



2 Use of prefabricated 90° angle brackets.



3 Fasten the two 90° angle shoes with two M10 bolt anchors per angle bracket.



4 Fitting the square tube (50 × 50 mm) into the angle brackets.



Fit the anti-slip strips with the enclosed stainless steel screws. **Our tip: use an adjustable gauge to fit quickly and accurately!**

Installation steps for a 360° angle bracket



1 Application for expansions and trapezoidal junctions.



2 Fasten angle bracket with adjustable angle dimension with two M10 bolt anchors each.



3 Fitting the square tube (50 × 50 mm) into the angle bracket.

The hanit cable duct

in two dimensions

Type 550 with locking clips



Available in the following colour:



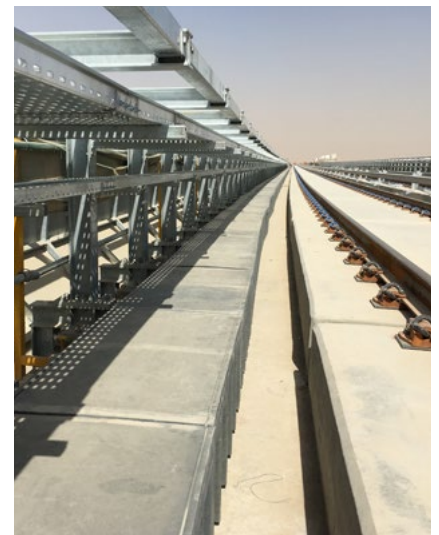
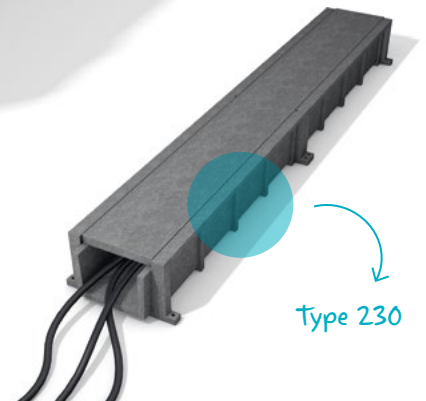
grey

Product information

- Cover locked with clips (type 550)
- Does not react with water
- Acid and alkali resistant
- Simple and form-locked assembly
- Quick and easy to attach to the floor

Product dimensions

- **Type 550**
Internal, W × L × H: 420 × 1,100 × 300 mm,
External, W × L × H: 550 × 1,145 × 388 mm,
Weight: Channel 35 kg, lid 21 kg
- **Type 230**
Internal, W × L × H: 193 × 1,000 × 135 mm,
External, W × L × H: 373 × 1,040 × 205 mm,
Weight: Channel 17 kg, lid 7 kg

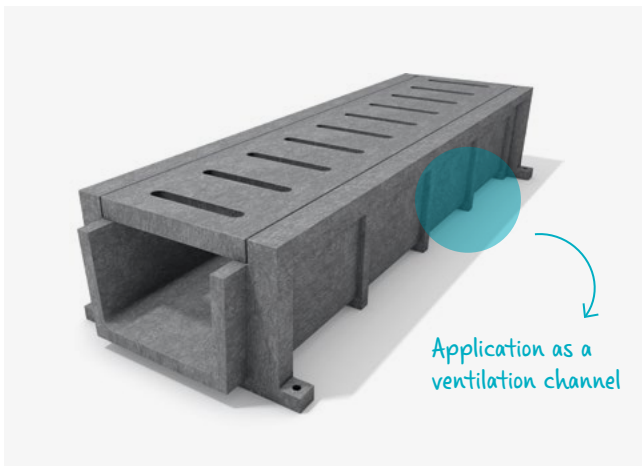


Our universal channels are easily transportable thanks to their material properties and can be easily processed using standard tools. The universal channel can be drilled, sawn and screwed. It can be loaded immediately after it has been installed.

It can be used for draining surface water, for draining (contaminated) liquids and as an installation or supply channel. The Type 230 model featuring a slotted cover can be used as an aeration channel in composting plants.



Type 230 with slotted cover



- Dimensions (W × L × H): 373 × 1,000 × 205 mm
- Weight: 24 kg per piece
- Can be machined using standard tools
- Simple and form-locked assembly
- Acid and alkali resistant
- Quick and easy to attach to the floor

Available in the following colour:



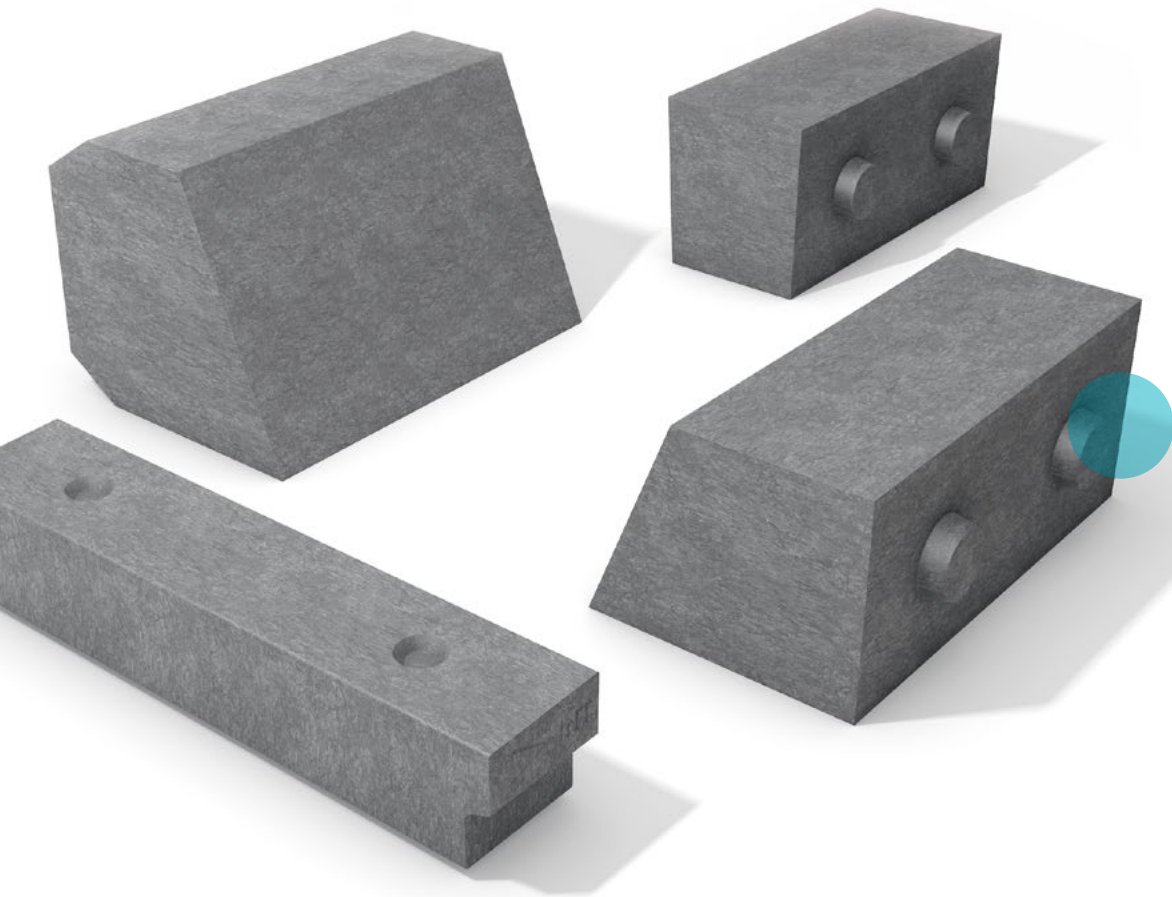
grey

Can be used on a large scale – our ventilation channel



Tunnel blocks

Special solutions for the tunnelling industry

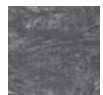


Product information

- High load-bearing capacity
- Dimensionally stable
- Corrosion-free bearing
- Tension-free bearing (2-, 3- or 4-point)
- Project-related customisation: Radius, locking knobs, recessed grip, marking

On request with locking knobs for secure positioning

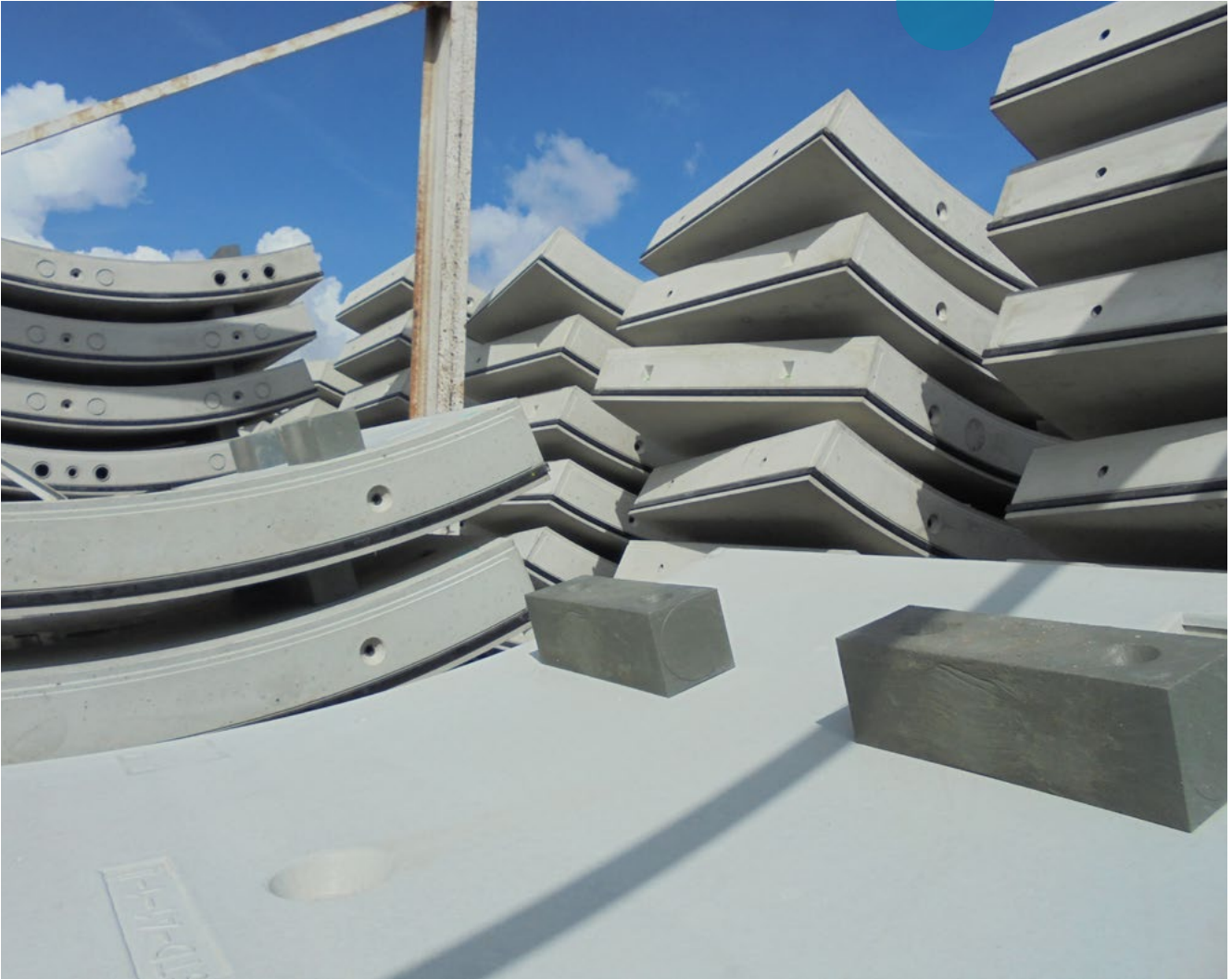
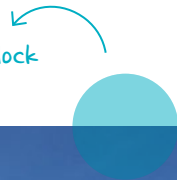
Available in the following colour:



grey



Customisation of the segment block possible for individual projects



Container plate

For a secure footing

Product information

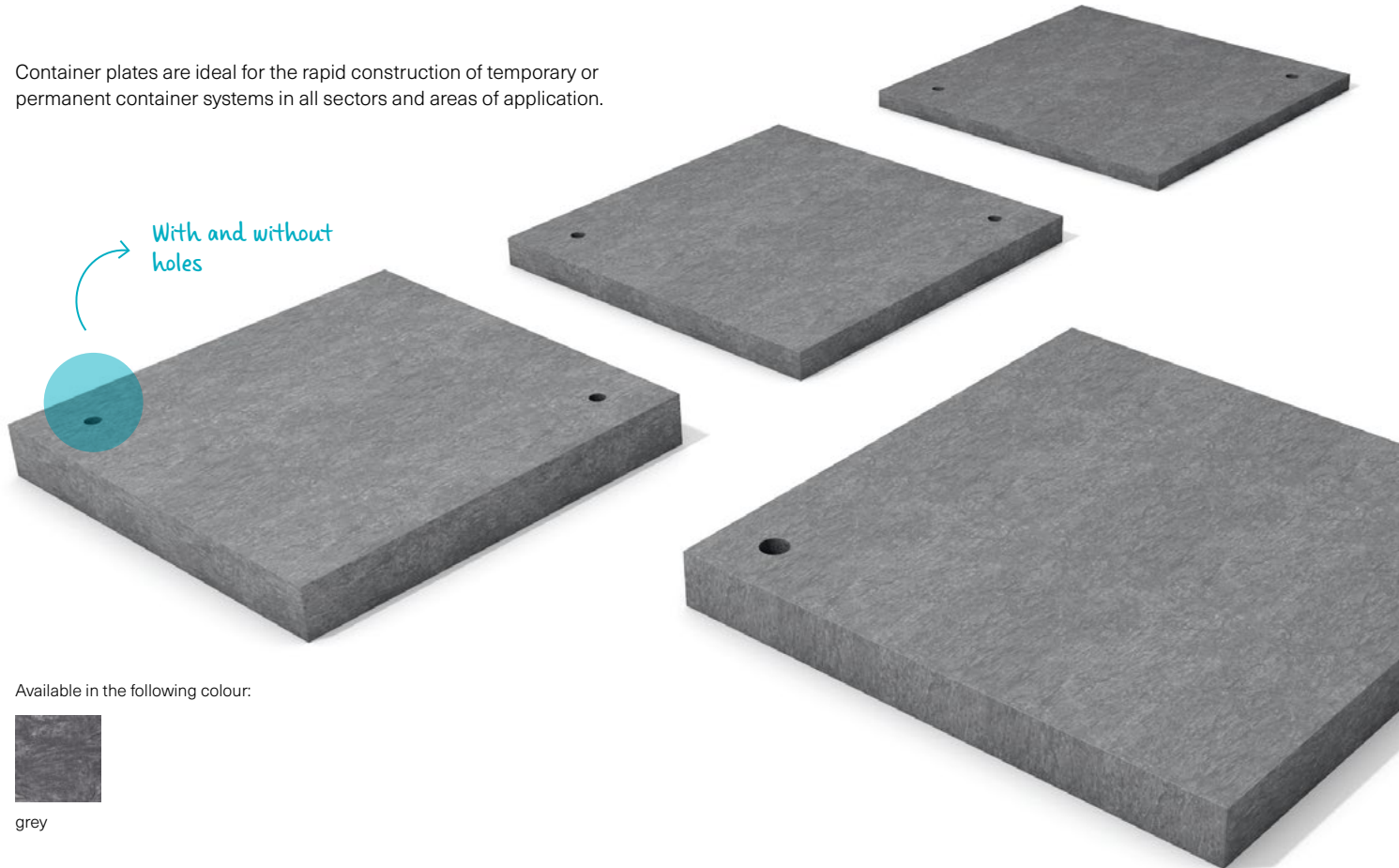
- Compressive stress: 5 N/mm² for all plates
- Lightweight
- No heavy equipment required
- Quick and easy assembly
- Lighter and more durable than concrete
- Two holes for centring and stacking the plates
- Reusable for different projects
- Withstands high loads

Product dimensions

- With holes
Thickness: 20 and 30 mm, 400 × 400 mm
Thickness: 50 mm, 400 × 400 mm, 500 × 500 mm
- Without holes
Thickness: 70 mm, 600 × 600 mm



Container plates are ideal for the rapid construction of temporary or permanent container systems in all sectors and areas of application.



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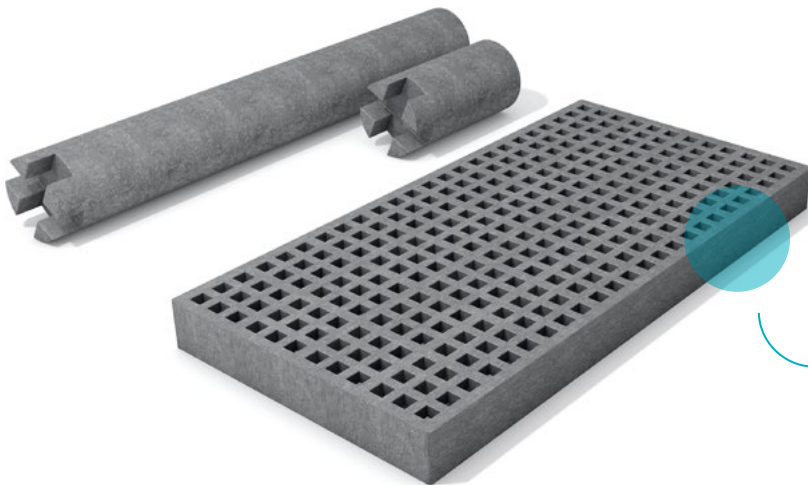
grey



Suitable for vehicles with a total weight of up to three tonnes



Supports 300 – 1,000 mm, Note the lengths in stock!



Large opening (32%) for sufficient air circulation

Product information

- Components for biofilter systems (exhaust air purification) and drying (e.g. grain drying)
- System of heavy-duty grating floors
- Hydrophobic material properties
- Acid and alkali resistant
- Temperature-resistant up to 50 °C

Product dimensions

- Panels (W × L × H): 500 × 1,000 × 80 mm
- Weight
 - Grid plate: 15.7 kg
 - Closed plate: 17.3 kg
- Supports: Ø 150 mm,
 - Lengths in stock: 350 / 450 / 550 / 700 / 1,000 mm**
 - Additional lengths: 300 / 400 / 500 / 600 / 650 / 750 / 800 / 850 / 900 / 950 mm
- Weight: 2.7 – 9.5 kg

Available in the following colour:



grey



1. Adaptable to all dimensions

The hanit elevated grating floor system can be easily cut to size on site, allowing it to be customised to size and function in complex areas.

Biofilter raised flooring system

Perfect for use as a ventilation and inflow floor

Areas of application

- Biofilter systems (aeration and inflow floor)
- Industrial plant construction (as walkways, raised floors, drainage gratings or as standing surfaces in work platforms, ramps and production and transfer lines)
- As floor or shelf panels for pollutant collection stations

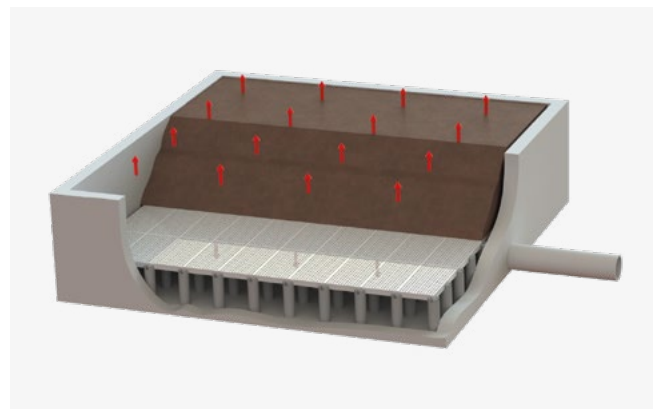


Can be customised to local conditions



2. Quick and easy installation

Our grating floors are designed so that they can be simply attached to the crown of the pedestals.

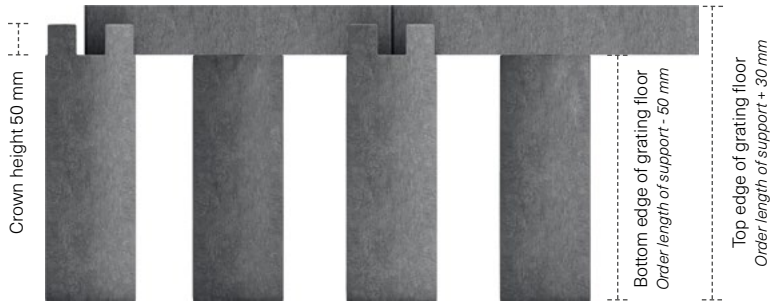


3. Very stable with a large air circulation area

Hanit grating is ideal as an aeration floor in biofilter systems.

Grating floors

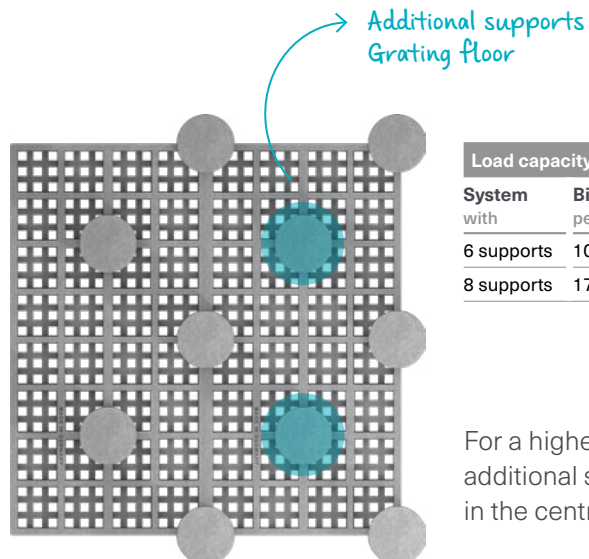
Good to know



The supports are set up on level and load-bearing ground. In the process, the crowns protrude upwards.



The grating floors are hooked into the pin crown of the supports from above.



Load capacity		
System with	Biofilter mass per sq m	Trafficability with vehicles*
6 supports	10 tonnes	2 tonnes
8 supports	17 tonnes	3 tonnes

* Total weight

For a higher load capacity, two additional supports must be placed in the centre.

Cable protection plate

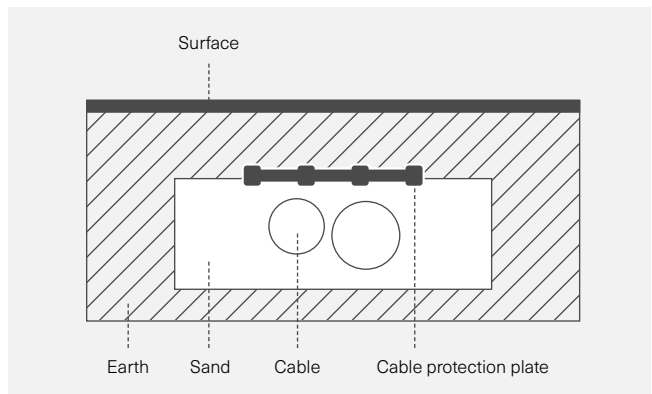


- Dimensions (W × L × H): 200 × 1,010 × 50 mm
- Low weight – only 7.2 kg per piece
- Protects cables and supply lines from damage during excavation work
- Very secure thanks to its strength and composition

Available in the following colour:



grey



Wedged Dunnage



Available in the following colour:



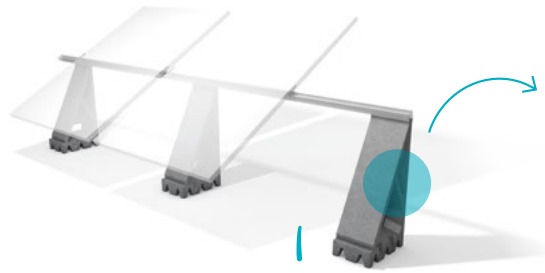
grey



- Dimensions in cross-section (W × H): 113 × 50 mm, maximum length: 2,450 mm
- Various profile dimensions possible
- Reusable, moisture and dirt repellent
- No blue rot, unlike wood
- Easy to process

Economical, sustainable – innovative

hanit INNOVATION New product development

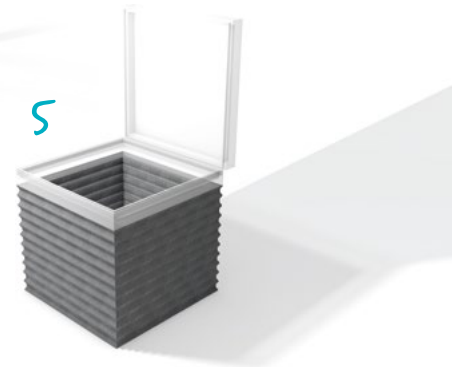
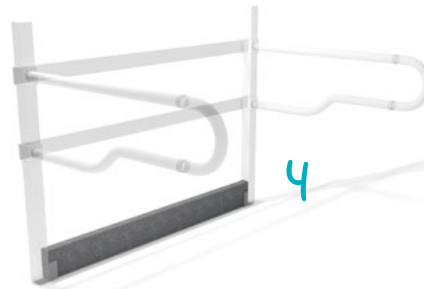


Individual successfully implemented customer products in various industrial sectors.



More and more customers from all kinds of industries are recognising the advantages of our recycled material. Where conventional materials such as wood, concrete, steel or new plastics reach their limit, hanit is the alternative.

We turn packaging whose useful life is short in some cases into products that can be used maintenance-free for decades thanks to their unique technical material properties while keeping valuable raw materials in the cycle.



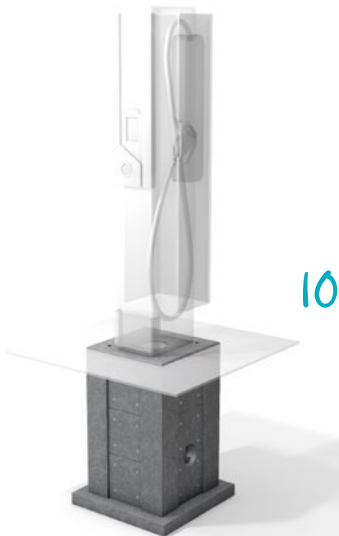
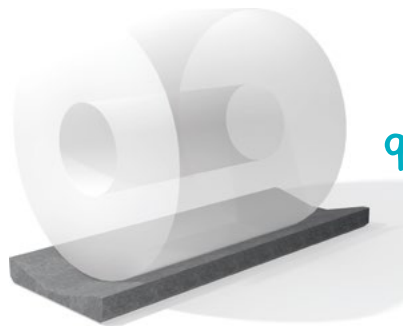
hanit has already proved its worth many times over in an industrial setting, as we develop smart and future-proof solutions for individual requirements in addition to our standard range that secure our customers crucial benefits in their market segment. As a result, a variety of exclusive customer products have already been created from hanit.

Maybe your product will be next? Why not get in touch with us!



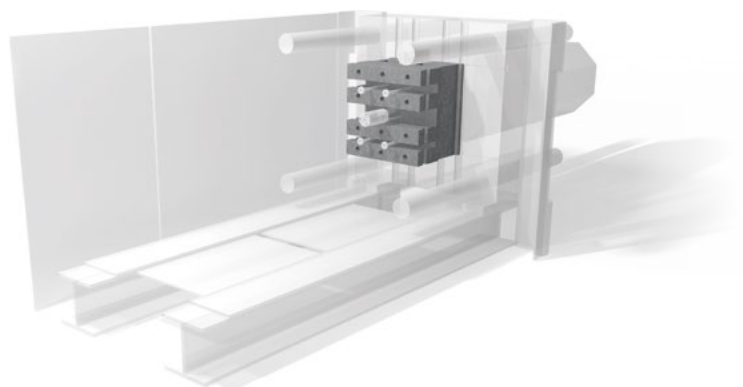
- 1 Photovoltaics / Mounting system
- 2 Road construction / Drainage channel
- 3 Chemical industry / Grate
- 4 Agriculture / Pen panel
- 5 Infrastructure / Inspection shaft
- 6 Construction industry / Foot plate

- 7 Traffic engineering / Cycle path separation
- 8 Plant construction / Precast base
- 9 Steel industry / Coil mat
- 10 Infrastructure / Precast foundations
- 11 Pipeline construction / Cable protection plate



Our range of services

- Design
- Mould construction
- Feasibility analysis
- Support in product development
- Static calculations
- Project support



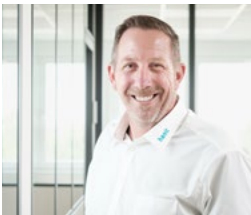
Our sales team

Find your right point of contact in our sales force



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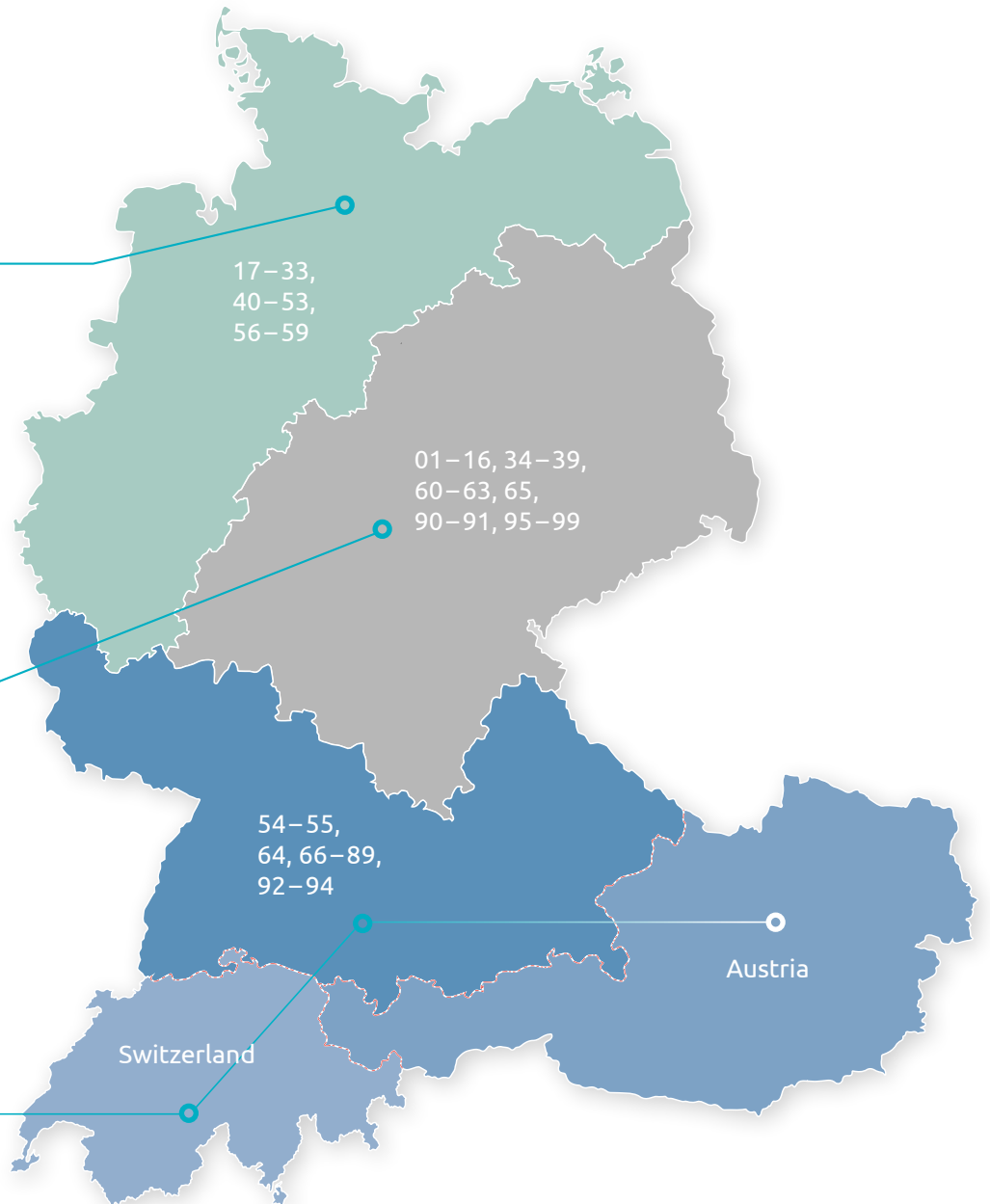
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A strong performance

The environmentally friendly material

Our environmentally friendly hanit material consists of 100% recycled plastic and is characterised by its wide range of potential applications. Products made from hanit can be used anywhere and are easy to install, easy to transport and protect our climate by minimising the use of new materials.

hanit does not require any chemical additives or impregnating agents. It is perfect for use in products such as grating floors, trench cover and segment blocks and excels wherever it can get damp and wet, or where there are extremely high demands on durability and load-bearing capacity.

In addition to being environmentally friendly, it is above all its outstanding product performance that makes this material unique: hanit combines the positive properties of wood, stone, plastic and concrete, and – in addition to its high utility value – represents outstanding value for money that quickly pays for itself.



Service hotline

You can access telephone support and advice on:

T +49 6543 9886-0

Mon – Fri, 8.00 am – 5.00 pm

Learn more at
www.hanit.eco



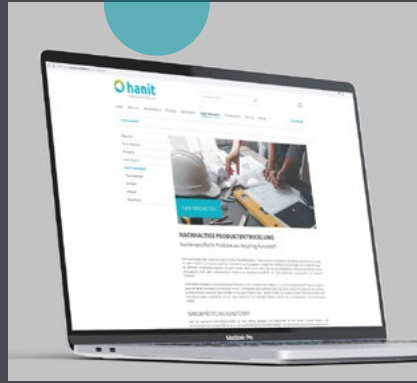
Also there for you on site at all times ...

We are also available for you on site at any time. Our comprehensive network of field sales staff are happy to help you put your ideas into action and answer any questions you may have. From planning and correct installation to simple and fast project management .

Interested in more hanit products?
Feel free to request additional brochures or
find us online at www.hanit.de



Flyer for product innovations



Website



Infrastructure Solutions

For example

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info@hanit.de
www.hanit.eco



www.blauer-engel.de/uz30a

As a certified company, HAHN Kunststoffe GmbH has been entitled to use the "Blue Angel" ecolabel since 2005.

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www.hanit.fr

HAHN Plastics Ltd.
Swinton M27 8LJ, Vereinigtes Königreich
www.hahnplastics.com

HAHN Plastics (North America) Ltd.
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www.hanit.ca

PRECO SYSTEM S.R.L.
33013 Gemona del Friuli (UD), Italien
www.plasticariciclata.it

HAHN Iberia Plástico Reciclado S.L.U.
31210 Los Arcos (Navarra), Spanien
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