Stone Resin Surfacing
Permeable Paving Solutions

hanit® – *the* material from recycled plastics

The economical alternative for industrial applications!

Selected profiles, finished parts and systems for industrial construction

*Industrial developments require constant innovation. Our recycled material **hanit**® today increasingly replaces the traditionally used materials wood, steel, metal, concrete and primary plastics.*

Plastic profiles made from **hanit®**

– the economical and ecological product of choice!

Industrial development requires constant innovation.
*Due to the very good price-performance ratio our material **hanit®** today increasingly replaces wood, steel, metal, concrete and primary plastics.*

Our **hanit®** products have already surprised many design engineers and offer users a whole range of benefits.
The **hanit®** material consists of recycled plastics, to be more precise, polyolefin mixtures.
The main components of these blends are polyethylene (LDPE/HDPE) and polypropylene (PP).
Through utilization of these high-quality recycled raw-materials (material purity level > 95 %) expensive new material is replaced and environmental resources are conserved.

Especially suitable for industrial construction, where demands are being made increasingly for robust, thick-walled and particularly durable product solutions, our profiles, finished parts and systems made from **hanit®** often provide a more economical solution and technical advantage.

Primarily, **hanit®** products are distinguished by their resistance to oils, alkalis, acids, seawater and to micro-organisms, as well as being stable and crack resistant. They are easy to work with and maintenance-free.

Technical data at a glance

			hanit®ductile	**hanit®robust**
Examination for:	**Standard DIN EN ISO**	**Unit**	**Measured value**	**Measured value**
Tension E-module	527-2	[N / mm²]	659	957
Stress at break	527-2	[N / mm²]	9.65	9.36
elongation at break	527-2	%	13.8	3.7
Tensile strength	527-2	[N / mm²]	9.65	9.36
Tensile elongation	527-2	%	13.8	3.7
Bending E-module	178	[N / mm²]	581	890
Bending stress at 3.5% extreme-fibre strain	178	[N / mm²]	11.6	15.2
Bending stress at F_{max}	178	[N / mm²]	15.1	18.0

PRODUCT ADVANTAGES

Material Durability
- Weather-proof
- Rot-resistant, splinter-proof, low risk of injury
- All year use possible

Low Weight
- Installation without heavy equipment
- Faster installation
- Reduced workload

Simple Handling
- Easy to process mechanically (drilling, sawing, screwing, nailing
- Simple on-site adjustments possible

Economical
- Long useful life
- Intermediate lengths on request
- Maintenance-free, no upkeep costs
- Made from high-quality upgraded secondary plastics (polyolefins)
- Resistant to vandalism
- Very good price-performance ratio
- Lower transport costs in comparison to concrete
- Ideal construction material, especially for rugged profiles and precast elements

Ecological
- Manufactured without impregnation
- Relief for waste sites – sustained environment protection
- Fully recyclable
- Awarded with the Blue Angel environmental label
- Harmless to water
- Contaminant-free (in compliance with soil protection regulations)

Fabrication of our hanit® products
– using proprietary manufacturing processes!

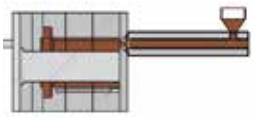
Our **hanit®** products are fabricated using various manufacturing processes. These procedures in detail are:

- Extrusion
- Injection Moulding
- Intrusion Moulding
- Pressing

Extrusion

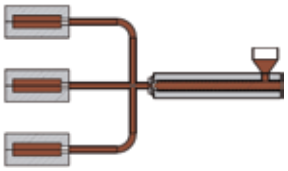
In extrusion, the plasticized mass (melt) is continuously processed through extrusion dies (tools) into semi-finished products.

Injection moulding



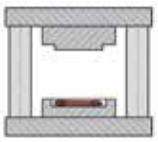
In this process thin-walled parts can be economically produced in large quantities.
The difference between extrusion and injection moulding is that with injection moulding a finished part "comes out", whereas with extrusion semi-finished products such as rods, planks and boards are formed.

Intrusion moulding



The intrusion process is a combination of extrusion and injection moulding.
The reclaimed materials are plasticized, filled into mould cavities and then cooled to solidification.
Depending on the mould cavity, split or unsplit, the product is either pushed out by the machine or manually removed.
Using intrusion, various products with shot weights of 1 to 200 kg can be realised.

Pressing



Even during the pressing process the plastics must be heated before the shaping.
Subsequently, the required volume of plastic material is dosed into a tool and brought into the desired shape by hydraulic pressure action of up to 200 tons.
The still warm moulding is then removed from the mould and usually placed in cooling supports to avoid warping.
The press method is suitable for producing thin-walled and large-area products.

Thanks to our manufacturing processes we are able to react quickly and flexibly to our customers' most diverse product requirements.

MATERIAL PROPERTIES

- Electrically non-conductive
- Fire behaviour: Fire Class B2 (DIN 4102)
- Pressure resistant
- Density: approx. 0.93 g/cm³
- Low thermal conductivity, the thermal conductivity value is about 0.23 [W/mK]
- Continuous operating temperature: -20 to +50 °C
- Waterproof (hydrophobic)
- Resistant to oils, alkalis, acids and seawater
- Resistant to micro-organisms
- UV-resistant
- High splinter resistance
- Material is fully pigmented

DER BLAUE ENGEL
weil aus Recycling-Kunststoffen
schützt die RESSOURCEN

1 Mayflower Place
Milford, CT 06460
203.450.6640
info@StoneResinSurfacing.com

Stone Resin Surfacing
Permeable Paving Solutions