



REHAU®

Unlimited Polymer Solutions



RELAZZO - THE DECKING SYSTEM FROM REHAU

TECHNICAL INFORMATION R20600 EN

RELAZZO - THE DECKING SYSTEM FROM REHAU

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RELAZZO - THE DECKING SYSTEM FROM REHAU

1. General information

1.1 Applicability

This Technical Information applies to the Relazzo decking system from REHAU, comprising boards, substructure, brackets, end cap and end trim.

In addition to this information, the products and their relevant scope of delivery are specified in the latest edition of the Technical Delivery Specification.

1.2 Area of application

The Relazzo decking board and the substructure have been specially developed for use as decking. The products do not have general technical approval and should therefore not be used for self-supporting, structural purposes. Local building regulations are to be observed accordingly.

When laying on balconies or bridgework, for example, it is important to provide a structurally sound foundation and, where necessary, to use a steel substructure with small spacing between supports (see 3.3 Design).

1.3 Ecology/economic efficiency

In terms of sustained environmental ecology, the Relazzo profiles are completely recyclable. They can generally be disposed of as skip refuse or via recycling centres. The locally applicable regulations and directives are to be observed here.

Thanks to the considerably greater durability and virtually no need for additional treatments, Relazzo decking profiles are substantially more economically efficient in the long term than conventional wooden coverings.

2. Product information

2.1 Product description

The Relazzo profiles (decking boards and substructure) are made of high-quality polypropylene and at least 50% wood fibres from sustainable, European forestry (PEFC-certified). This material combination of wood and polymer is known as wood-polymer composite, or WPC for short. The WPC material RAUWOOD, developed in-house by REHAU, adds wood fibres to polypropylene, combining the positive properties of plastics and wood in particular. Its excellent mechanical characteristics give the profile a natural feel and look.

Additional surface brushing on the Relazzo profiles creates a roughened finish, further enhancing the natural look of the product.

Advantages over solid-wood decking include the reduced cleaning and maintenance required, greater durability and better dimensional stability.

Relazzo decking is reversible, offering a choice between two different profiled surfaces (tongue or groove).

The individual decking boards are secured using stainless steel brackets, designed in house, ensuring simple assembly and adequate structural stability, as well as allowing for the disassembly and reassembly of individual boards at a later date.

The Relazzo decking system has the „Qualitätsgemeinschaft Holzwerkstoffe e.V.“ quality seal of the VHI (Association of the German Woodworking Industry). This quality seal sets out uniform quality criteria for decking profiles and is given to products that fulfil the highest of qualitative requirements. The properties of Relazzo are subject to regular testing by an independent, external institute.

2.2 Dimensions and permissible deviations

All dimensions and tolerances are set out on the latest version of the REHAU drawing. For dimensions without any special tolerance specifications, the following general tolerances apply in accordance with DIN 2768.

Component	Dimensions [mm]
Board (hollow section)	140 x 30 x 4.000 / 5.000 / 6.000 (w*h*l)
Substructure (hollow section)	60 x 40 x 4,000 (w*h*l)
End trim (angle profile)	40 x 60 x 4,000 (w*h*l)

2.3 Surface finish and colour

To increase the anti-slip properties of the surface, the Relazzo profile is roughened with a special brushing process. Unlike solid wood or unbrushed WPC decking boards, this gives the Relazzo profile an anti-slip classification of R11-R12 (approval for public areas such as shop entrances, outside steps and kitchens in shared residential houses). Above all, this process minimises the risk of an accident on wet profiles.

The special finish also strengthens the character of the wood in the profiles. Brushing is carried out uniformly in one direction, raising the wood particles evenly. In order to avoid an irregular look, you should ensure that all boards are laid in the direction of brushing. The direction of brushing is indicated by the marking or arrow on the side. However, you can also use the brushing to purposely achieve desired visual effects (like stripes on a football pitch).

The Relazzo boards are currently available in the following colours:

Colour		
Decking board:	Terra	Dark brown
	Sabbia	Light brown
	Ciottolo	Grey
	Ametista	Red brown
	Grano	Light brown
	Ambra	Mid brown
Substructure:	Terra	Dark brown

2.4 Colour development

What makes the Relazzo decking boards particularly impressive is their high colour resistance.

However, wood is a natural product and is subject to colour variations, which can become noticeable depending on the weather, especially in the period after installation. The basic colour of the decking, which is derived from the dyed polymer component, is nevertheless retained in the long term and reflects the product's colour character at any given time.

The reaction of the wood component lignin with the UV part of sunlight causes a yellowing of the wood fibres to occur in the surface layers of the decking boards. However, discolouration occurring in this way is washed out again by the effect of water (e.g. rain) within the first few months. The wood fibres then go through the natural greying process. However, the described colour changes do not impair in any way the mechanical properties of the Relazzo decking system.

Differences in colour resulting from the movement of objects (for example flower pots) also go through the natural greying process. You can accelerate this natural process by spraying the surface with water within the first 8 to 10 weeks after installation (e.g. with a high-pressure cleaner, see 3.2 Care tips, Basic cleaning).

Subsequently removing the greyed fibres by means of high-pressure cleaning with a high nozzle pressure or by sanding the surface only leads to a brief lightening of the wood particles. The process of yellowing and greying then starts all over again.


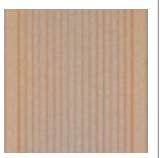





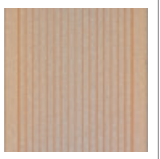

	Terra	Sabbia	Ciottolo
Original colour immediately after installation.			
Yellowing depending on sunlight after one day to two months.			
Fading and greying depending on weather conditions after two to five months.			

Figure: Examples of discolouration of the wood particles caused by weathering.

2.5 Thermal properties

The material RAUWOOD was developed so as to ensure high dimensional stability and profile strength even in strong sunlight. However, long-term exposure to direct sunlight at temperatures of over 70 °C on the surface of the decking boards should be avoided in order to prevent damage to the surface, as well as mechanical stress. At permanent ambient temperatures of over 30-35 °C, the substructure spacing should also be reduced by 10 cm depending on the installation method used.

WPC products warm up under the effect of heat just like any other building material. Dark shades warm up more than light shades. It is important to remember this when walking barefoot on the decking.

2.6 Chemical properties

REHAU products made of WPC do not contain any heavy metals or any other components that may be harmful to the environment.

The material RAUWOOD has high resistance to external environmental influences. Exposure to strong oxidation agents such as industrial bleaches and strong acids, as well as organic solvents (e.g. ethanol, acetone, xylene, hydrocarbons, etc.), should, however, be avoided. Relazzo is suitable for use around the pool (in chlorinated air) and on the coast (in salty air).

2.7 Preventing accidents

In order to rule out any risk of physical injury, the following advice must be observed and followed. If there are individual points where the load is more than 300 kg, the substructure is to be set up so that it is narrower than specified (depending on the laying direction).

The products do not have general technical approval and should therefore not be used for self-supporting, structural purposes.

Local building regulations are to be observed accordingly.

In the case of wet, icy or other slippery conditions, beware of reduced slip resistance.

Due to the grooved effect on the boards, as well as the installation grooves (expansion gaps), there is also an increased risk of tripping when wearing shoes with thin, pointed heels.

3. Practical advice

3.1 Maintenance

In view of the material properties, Relazzo decking boards do not require any subsequent protective coating treatment (oil, varnish), as is necessary with solid wood products to protect the wood. There is also no need to treat the boards with wood protection substances for mould or discolouration.

3.2 Care tips

Care and maintenance of the Relazzo decking boards is the consumer's responsibility. The more often the decking is cleaned, the cleaner it stays in the long term.

Regular cleaning removes various deposits (dirt, bits of food, etc.) especially from the grooves. This prevents mould, which would otherwise grow on the dirt deposits. It is fundamentally important to always deal with spills (particularly grease and oil) as quickly as possible to minimise the amount that seeps into the wood fibres. In most cases, immediate treatment with hot soapy water is sufficient. If bleaching agents are used on stubborn dirt, the relevant agent should be tested first on a hidden area of the decking to ensure it won't remove the colour.

The following cleaning measures should be carried out for light to heavy dirt.

Table: Cleaning recommendations, summary.

Cause	Example	Cleaning recommendation
All		Light Water Mild detergent Sponge Sandpaper Wire wool Steel brush Heavy Bleaching agent
Dried-on food	Red wine	Diluted chlorine water solution, high-pressure cleaner
Sugary refreshments	Cola	
Hot drinks	Coffee	
Burn marks	Cigarettes	Sandpaper, wire wool, steel brush
Acids	Sulphuric acid	
Bases	Caustic soda	
Painting	Paint	
Iron	Spots of rust	Oxalic acid, phosphoric acid
Moisture	Mould	Sodium hypochlorite (liquid bleach)

Basic cleaning (dirt):

Weekly sweeping and washing down with warm water (not too hot) at least twice a year will generally keep the decking clean in the long term. If simply washing down with water is not sufficient, we recommend spraying the decking with a high-pressure cleaner (max. 60 °C, 100 bar, at a minimum distance of 500 mm) and cleaning with detergent or a commercial floor cleaner. Dirt milling is not recommended. Oxalic-acid-based decking cleaners should be used for stubborn spots. Animal excrement and urine can usually be treated and removed in the same way as any other dirt with warm water, a high-pressure cleaner and light detergents.

Special cases:

Pencil marks from the installation process can be removed easily with a rubber. Chalk marks, with the exception of white chalk, cannot be removed, but can be lessened with warm water and a bleaching agent. Paint is extremely difficult to remove but the best thing to use is white spirit.

Dirt from the barbeque:

Grease, charcoal and cigarette ash are some of the most difficult substances to remove. Whereas grease marks can generally be removed with special decking cleaners or fat solvents, charcoal or ash marks can only be removed by sanding down the decking. However, each time the decking is sanded, the original brushed look deteriorates. You should therefore ensure that any sanding treatment is carried out in the direction of the original brushing. We strongly recommend placing a mat under the barbeque.

Mould:

Warm water with detergent or chlorine cleaner (bleaching agent) helps to combat mould. For well-established mould, several treatments are often necessary; special anti-mould cleaners are available from specialist retailers. We would advise against using bark mulch in the immediate vicinity, as this generally contains mould spores. Under certain climatic conditions and where installation is not compliant with REHAU standards, fungal growth is also possible. However, the risk of this can be reduced by keeping the decking clean and dry. It is therefore important to ensure that the decking is well ventilated (with gap spacing), as is the substructure (paving slabs) in line with the official installation instructions.

Rust:

To eliminate spots of rust, we recommend a cleaner based on oxalic or phosphoric acid.

To secure the profiles, the materials supplied (brackets, screws, etc.) made of high-grade, coated stainless steel should be used. Otherwise, rust may form and damage the securing components.

Snow and ice:

In order to prevent scratches on the decking, we recommend using plastic shovels to remove snow; never scrape or hack away at ice with an ice pick. General gritting salt can also be used to remove snow and ice.

3.3 Processing/assembly advice

(More detailed assembly advice can be found in the installation instructions)

Processing:

The Relazzo profiles can, in principle, be processed using common woodworking machines. Drilling holes, sawing, milling and planing should also be possible. However, in view of the polymer content, a reduced service life of the tool cutters should be expected. In the case of sawing work (with a circular saw), a hard metal saw blade with replaceable teeth is recommended. Clean deburring is generally advisable.

Design:

The substructure profiles are laid with a spacing of maximum 500 mm between one another on slabs (stone or paving slabs) to prevent them from becoming waterlogged. In the case of heavier loading, installation angles other than 90° to the substructure, or permanently high temperatures, this spacing should be narrower. The assembly brackets are screwed on to the substructure and secure the decking boards by means of a clamping process on the left and right. For the screwing process, we recommend pre-drilling holes in order to prevent the screws coming away from the substructure, especially at the start and end brackets.

Expansion:

During assembly, it should be noted that the Relazzo profiles (decking boards and substructure) may swell and shrink over the next few years as a result of temperature and humidity influences. It is therefore necessary to ensure that there is an expansion gap between the individual profiles themselves and all vertical objects (house wall, etc.). As a rule of thumb, for each lineal metre of decking, a 3 mm gap should be left for longitudinal joints. The installation instructions should be observed.

Edge finish:

The cavities of the decking boards can be sealed with an end cap or end trim made of aluminium. The end caps should be glued flat to the boards with the usual Pattex Classic to protect against the influence of heat and frost. When fitting the end trim, it is helpful to fix the supplied spacer blocks to the end trim using instant adhesive. Blocking off the cavities means that less dirt and water can penetrate the hollow spaces. However, this is not absolutely necessary. Visually, both end caps and end trim form an attractive and high-quality edge finish.

3.4 Storage suggestions and handling

In the first few days and weeks in particular after installing or using the decking for the first time, light conditions cause a natural greying process (see 2.4 Colour development).

If covered permanently, discolouration, so-called mildew stains, may occur on the decking.

The decking boards and the substructure are supplied in timber frame crates; the profile package is wrapped in film. Nevertheless, we recommend storage in a hall or at least indoors to prevent discolouration due to moisture and sunlight. Opened packaging units and non-processed profiles should always be stored flat in dry rooms.

It is important to ensure that work areas are clean to avoid dirt and scratches, etc. If individual parts are stacked, you should ensure that any damage to boards and substructures is avoided.

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DO YOU HAVE ANY FURTHER QUESTIONS?

Our verbal and written advice relating to technical applications is based on experience and is to the best of our knowledge correct but is given without obligation.

The use of REHAU products in conditions that are beyond our control or for applications other than those specified releases us from any obligation in regard to claims made in respect of the products.

We recommend that the suitability of any REHAU product for the intended application should be checked. Utilization and processing of our products are beyond our control and are therefore exclusively your responsibility. In the event that a liability is nevertheless considered, any compensation will be limited to the value of the goods supplied by us and used by you.

Our warranty assumes consistent quality of our products in accordance with our specification and in accordance with our general conditions of sale.

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Do you require any further information, samples or advice relating to Relazzo?

Please contact your nearest specialist retailer, which can be found on our homepage www.rehau.com/relazzo, along with further information about the REHAU Relazzo product range and the installation instructions. You can also contact us by email: relazzo@rehau.com.

Legal information: The Relazzo WPC profile and substructure do not have general technical approval and should therefore not be used for self-supporting, structural purposes. Local building regulations are to be observed accordingly.

Please observe the installation instructions.