

Application Guide



Grabo
SHOW
FLOORINGS



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TABLE OF CONTENTS

STORAGE and TRANSPORTATION 3

SUB-FLOOR 4

CUTTING 4

LAYING METHODS 6

LOOSE-LAY INSTALLATION 6

SEMI-PERMANENT INSTALLATION 7

PERMANENT INSTALLATION 8

CLEANING AND MAINTENANCE 13

CLEANING AND MAINTENANCE OF THE TEMPORARY FLOORS 13

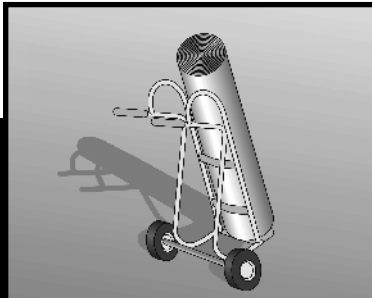
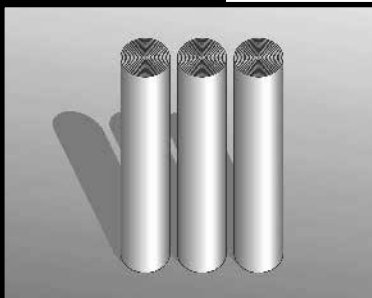
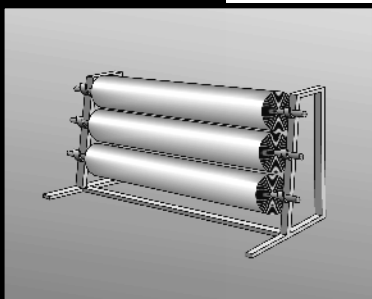
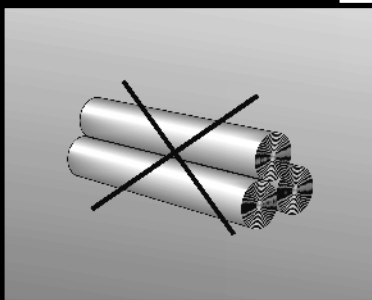
CLEANING AND MAINTENANCE OF THE SEMI-PERMANENT AND PERMANENT FLOORS 13

PRODUCT - LAYING - WELDING - APPLICATION SUMMARY 17

LIST OF TOOLS AND MACHINES 18

STORAGE and TRANSPORTATION

Grabo Performance floors are supplied in rolls and they should be stored according to the below information:



1. The rolls should be stored vertically or on bars/racks in their original packaging indoor dry, clean and well ventilated premises.
2. In case of multiple-use always keep the floors firmly rolled onto the cardboard tubes from the original packaging. This helps to prevent the flooring being flattened or dented. Never roll up the flooring without the cardboard tube inside.
3. The floors should not be exposed to strain, pressure or other load during transportation and loading.
4. Do not place any objects on top of the rolls during storage and transportation.
5. Ideally store the compact vinyl floor with a long metal or wooden bars or vertically.
6. Foam-backed rolls should be stored vertically. Make sure that the roll ends are square.
7. Covered storage outdoors is not permitted.
8. The rolls should be stored indoor at temperatures between +10 °C and + 25 °C. Temperatures above or below these values are permitted only for a short time.
9. Storage in damp locations and condensation should be avoided. The relative humidity should be 40 – 75 %.
10. In heated storage locations the rolls should be protected from the heat source. The distance between the heat source and the stored products should be at least 2 meters.
11. The rolls should be delivered vertically .If there is no possibility to deliver the rolls vertically, transport the rolls horizontally in original packaging in one row.

SUB-FLOOR

Proper preparation of the sub-floor is essential.

The sub-floor should be perfectly clean, flat, permanently dry, free from cracks and anti-adhesion substances (e.g. paint, oil, grease, plaster, adhesive).

The sub-floor must have sufficient tensile and compressive strength.

The sub-floor temperature directly before the installation of the floor should be $+15 - +30^{\circ}\text{C}$.

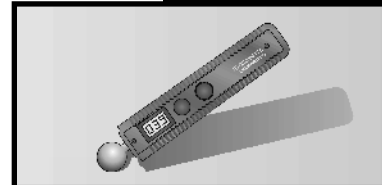
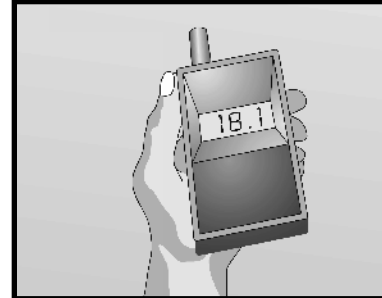
In case of permanent installation the concrete and cement sub-floor's moisture content mustn't exceed the value of 2, 5 CM %.

The proper quality – before the installation – should be ascertained by means of examinations and measurements.

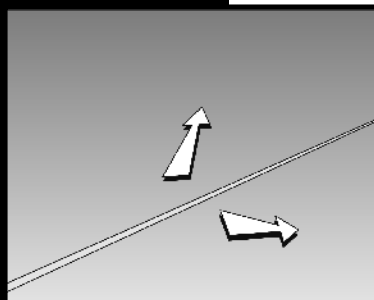
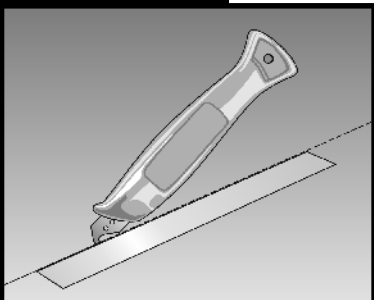
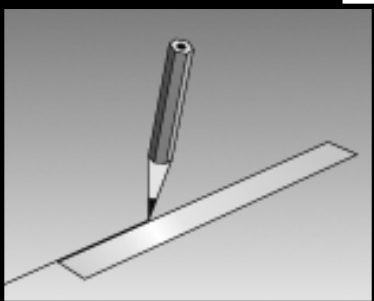
If the floor is to be installed over wooden, OSB, plywood or laminated floor, confirm that the boards are securely fixed and properly dried. All screw heads, nails and other hard edged protrusions should be removed or covered prior to the installation. These materials can damage your floor beyond repair and cause injury to dancers.

Fill cracks in the sub-floor with an appropriate filler and sand smooth.

Before floor installation remove the dust perfectly with vacuum.



CUTTING



If you plan to cut the floor, determine the size of the pieces before you unroll your floor. Before cutting and/or taping the rolls, we always recommend that you unroll your floor and let it rest for at least

24 hours at room temperature (approximately 18°C) to eliminate any wrinkles.

If you need to make a preliminary cut so as to be able to unroll it entirely, include an extra 2-4 cm for every 8 m strip. This precaution is of utmost importance should you need to cut the floor alongside walls or other obstacles (such as columns).

Once the floor has reached room temperature, you may proceed with the final cutting adjustments.

If you are cutting a long roll into shorter lengths, we strongly recommend completely unrolling it first and checking the full length.

Graboplast cannot be held responsible for errors in cutting that customers may make.

First, draw a straight pencil line to precisely define the part to be cut. Use a straight edge to draw your line.

Secondly, carefully cut the roll using a sharp floor knife along the straight line pencilled in.

LAYING METHODS

Depending on the application area and on the technical requirements you can choose from the next methods:

LOOSE-LAY INSTALLATION: Recommended especially for touring shows, exhibitions, events, TV&film studio, ceremonies. First, the floor is rolled out then the seams are covered with adhesive tape, normally 50 mm wide.

SEMI-PERMANENT INSTALLATION: Recommended especially for stages, TV & film studio, multi-purpose halls, allows a vinyl floor to be temporarily laid or reused. Semi-permanent lay consists of fixing the vinyl with double-sided tape under the seams then taping over the top of the seams. Alternatively, the seams can be hot or cold welded instead of taped.

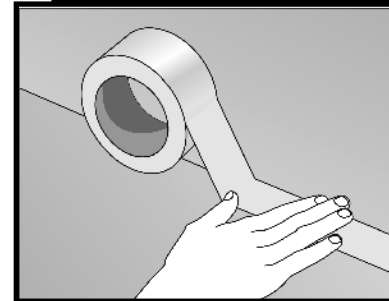
PERMANENT INSTALLATION: Recommended especially for dance studio, cinema, casino, and clubs. The floor is stuck down completely with glue. The seams are sealed by hot or cold welding. The hot method melts a flexible PVC welding rod onto the seam and the cold weld works by using a solvent to fuse the two sides together. Both welds are suitable and waterproof.

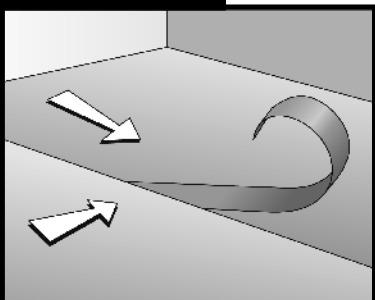
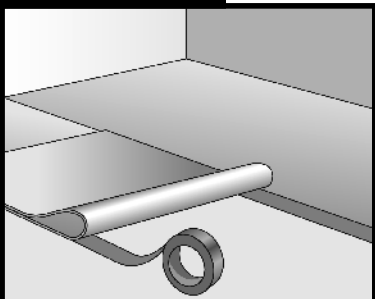
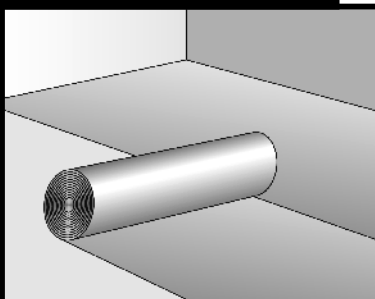
LOOSE-LAY INSTALLATION

Taping the surface of your floor is very simple: unroll the floor strips side by side. Unroll and fix a few centimetres of adhesive tape onto the seam between the two first strips. A second person may help by putting a foot on the end to hold it tight, then unwind the tape in a straight line and fix it onto the seam.

It is recommended to allow for extra adhesive tape on areas exposed to frequent traffic, such as at the entrance area for example.

Tapes recommended: 50mm wide, one-sided PVC tape.





SEMI-PERMANENT INSTALLATION

1. Unroll all the floor rolls that you have previously cut to measure in the direction of the lay of the floor. Make sure that they are laid straight.
2. Starting from the side of the room opposite the entrance, lift half of the first laid strip and flip it onto the part of the strip which still lays flat on the floor.
3. As the first strip is now partly lifted and flipped backwards on its half-length, remove the bottom protection strip of the double-sided tape and fix the tape onto the floor by aligning it with the adjacent strip of vinyl. The double-sided tape will indeed be fixed to each side of the seams between the two floor strips.
4. Now lay the previously lifted strip of vinyl floor onto the upper protection strip of the double-sided adhesive without removing the strip.
5. Repeat steps 1 and 2 so to attach the second part of the first roll.
6. The whole length of the first strip has already been unrolled and pre-fixed.
7. Starting from one of the two ends of the first laid strip of vinyl, remove the upper protection strip of the double-sided tape and gently push on the vinyl floor to fix it to the adhesive tape.
8. The first strip of vinyl floor has already been fixed.
9. Repeat steps 1 to 7 until all the remaining strips have been fixed.
10. The seams are now ready to be covered with single-sided tapes or to be hot or cold welded.

Tapes recommended: removable, 50mm wide, plasticizer resistant double side tapes, e.g. TESA 4964 or similar.

PERMANENT INSTALLATION

The permanent lay technique means completely fixing the flooring using glue. The seams are sealed either by hot or cold welding. We strongly recommend having experienced professionals prepare hot and cold welding.

Before beginning the covering procedure make sure that the sub-floor perfectly clean, flat, permanently dry, free from cracks and anti-adhesion substances (e.g. paint, oil, grease, and plaster, adhesive).

The present preparation and laying guide is based on the Henkel Thomsit products but the products having similar parameters of any manufacturers (e.g. Mapei, Murexin, Uzin, Bostik, F-Ball, etc...) can be used.

The next laying method concerns the case of concrete/cemented sub-floor.

After dust removal the concrete sub-floor should be pre-treated with a primer (e.g. Thomsit R 777 dispersion primer diluted with water in a portion of 1:1 or with this equivalent).

The primer binds the residual dust, closes the pores and forms an adhesive bridge for the base flattener.

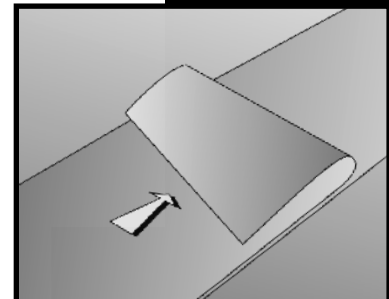
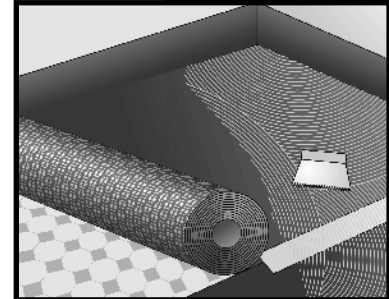
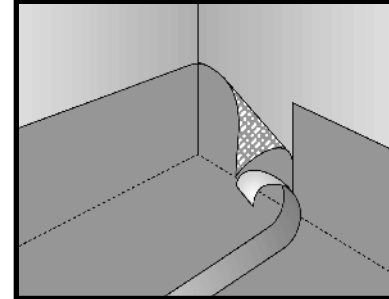
After the total imbibition of the primer the irregularities of the base should be eliminated by means of the proper base flattener. For choosing the magnitude of stresses and the deadline for installation should be minded. The mass properly diluted and mixed with water should be spread by means of a trowel. Then it should be deaerated by means of a spiked aeration roller. After drying the spatulated surface should be sanded and dedusted.

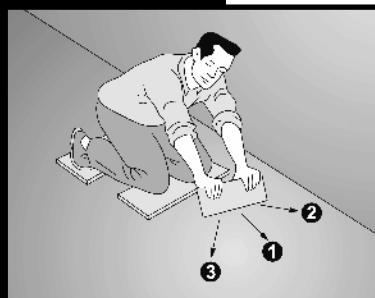
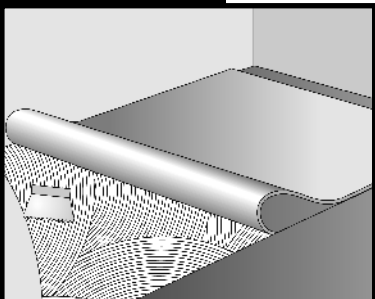
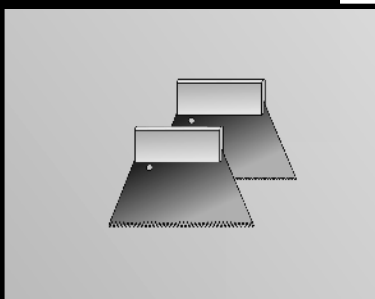
Installation of Grabo Performance floors with Grabo Vaporex membrane:

It is not compulsory to install Grabo Vaporex dampproofe membrane, it is only recommended! It is recommended in cases if the floor should be laid onto a new concrete base and the humidity of the concrete exceeds the value 2.5 CM %. The use of Grabo Vaporex membrane is recommended up to 6 CM % humidity of the cemented subfloor. Grabo Vaporex has excellent vapour draining properties.

It should be used for asphalt bases in any case. The Grabo Performance floor coverings and Vaporex should be conditioned and freed from stresses at site - at a temperature of 18 C° at least - 1 day before of laying down. The Grabo Vaporex products should be laid down to the properly prepared base with its patterned surface down, and folded up approx. 10 cm at the skirtings. The roll should be laid down abutting, and properly fastened with a polymer band of 5 cm on its back side (i.e. from the top). The membrane should lay flatly. It is better to lay down the Grabo Vaporex product lengthwise.

The floor coverings should be laid down on to the Vaporex membrane longitudinally and contact glue should be used as a bonding agent (Thomsit K 188 E or similar).





Installation of Grabo floors without Grabo Vaporex membrane:

The Grabo Show floor coverings should be conditioned and freed from stresses at site - at a temperature of 18 C° at least - 1 day before of laying down. The conditioned floor covering should be cut with a margin at both ends, then laid down abutting, precisely tailored the edges.

It is recommended to lay down the rolls longitudinally.

Gluing:

The tailored stripes can be fastened to the properly prepared concrete base in two ways.

Wet gluing

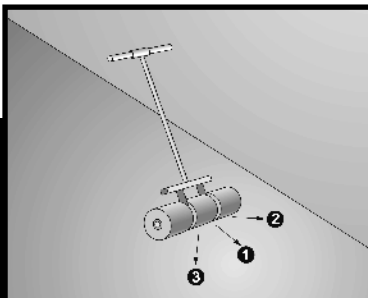
In case of absorbent sub-floors acrylic water dispersion adhesive (e.g. Thomsit UK 400) should be used. The adhesive should be applied on the sub-floor only by means of a spatula of B1 teething; material requirement: approx. 400g/m².

Contact gluing

Contact gluing can be used in case of absorbent or non-absorbent sub-floors as well.

- In case of absorbent sub-floors we recommend to use contact adhesive glue (Thomsit K 188E or equivalent with this). The adhesive should be applied on the sub-floor only by means of a spatula of A2 or A4 teething; material requirement: 250-350 g/m².
- In case of non-absorbent sub-floors (e.g. PVC gluing on PVC substrate) it is recommended to use only contact adhesive glue (e.g. THOMSIT K 188 E or similar) the adhesive should be applied on the sub-floor only by means of a spatula of A2 or A4 teething; material requirement: 250-350g/m². In case of non-absorbent sub-floors you can use 2-component PUR or 2-component epoxi glue, as well.

In case of permanent application the Grabo Performance floors can be installed also in case of underfloor heating, the before mentioned adhesive types are suitable as well.



Before gluing the strips should be folded up half-way and the selected adhesive should be applied. The ideal gluing conditions are specified on all boxes of adhesives by the manufacturers. These instructions should be strictly followed.

For the optimum adhesion the covering should be carefully pressed down – beginning from the middle – by means of a manual rubbing cork paying attention not to leave any air bubble under it. Finally the glued covering should be pressed down by a roller. The other half of the strip should be laid in the same way.

Welding:

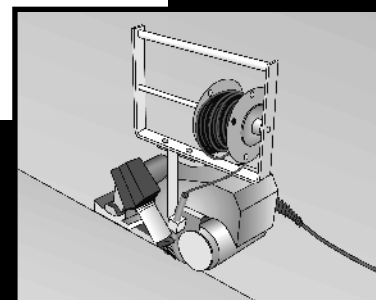
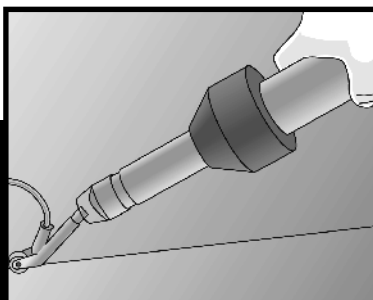
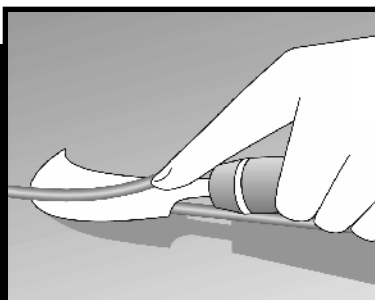
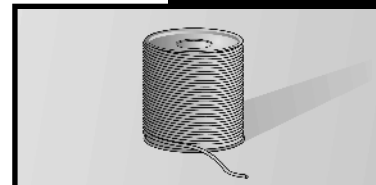
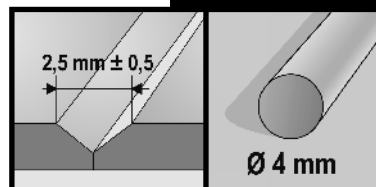
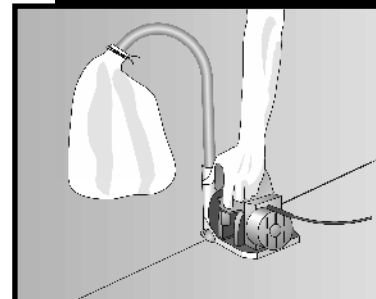
Heat welding:

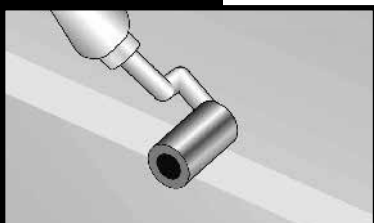
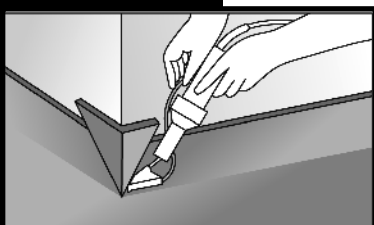
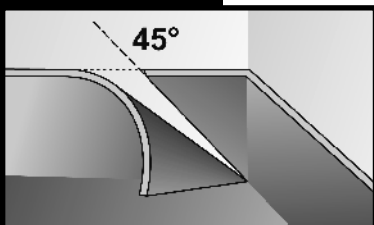
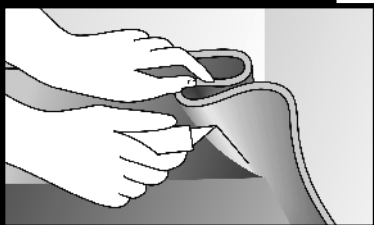
The made covering should be grooved along the joints in the proper depth and width with a grooving machine or a hand groove tool and the groove should be cleaned from the possible dirt. For welding the 4.0mm variation of GraboWeld should be used. For Extreme 80 use 4,5mm diametered welding rod.

The temperature of the welding machine should be set between 4-5 grades. Welding can be made with an automatic mobile welding machine or hand welding tool.

Before beginning the procedure it is recommended to make a trial welding in order to set the optimum temperature and speed.

After the weld seam cooled down the excess welding cord should be removed in two steps. First the cord should be half-cut by means of a slide and a quarter moon knives, then after total cooling flushing should be made with a quarter moon knife.





Heat welding in the corners:

From the perspective of the flooring external and internal corners are distinguished. Fitting of welds in internal corners can be performed in two ways: either by precision cutting and subsequent silicon filling of the seam, or by „half-rod” welding. In the latter case, the welding rod cut-offs from the first trim can be used to fill in the vertical seams by pressing them into the vertical grooves with the rounded side down and then applying heat coagulation to the joints. The excess welding rod should be trimmed off. It is recommended to pre-heat the coves before welding the joints. Precision cutting is important for external corners as well. Corner welding should be performed with a welding rod.

Cold welding:

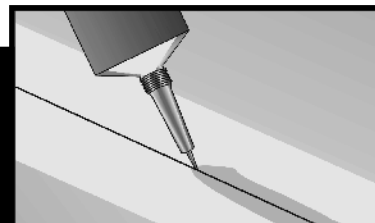
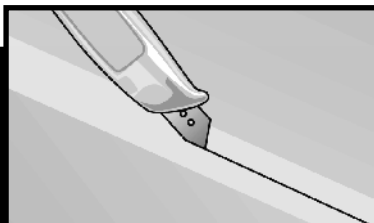
For Grabo Performance floors another welding method is the cold welding technology. The seams can be easily and quickly welded.

The cold welding technology consists of 3 steps:

- Paper adhesive band should be put and fastened with a pressure roll onto the joints of the closely fitted PVC stripes.
- The adhesive tape should be simply and definitely cut through in the seam range by means of a circular knife or a trapezoidal knife.
- The nozzle of the cold welding tube should be pushed with one hand into the seam and should advance along it. The cold welding agent should be fed by the other hand so that the adhesive band becomes wet in a width of 5 mm. The adhesive band should be removed after 10 minutes.

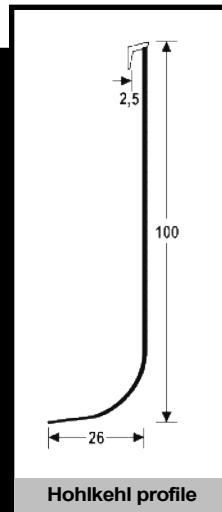
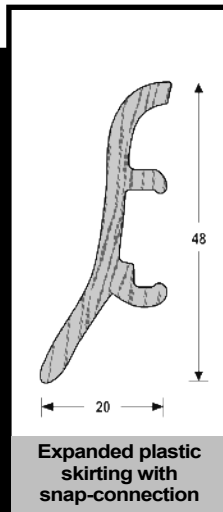
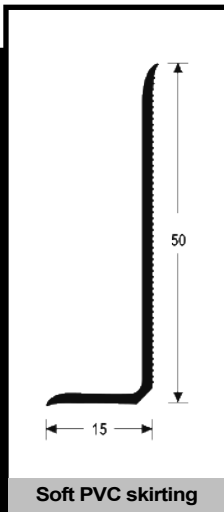
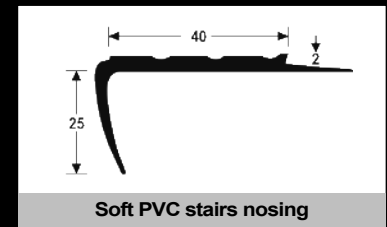
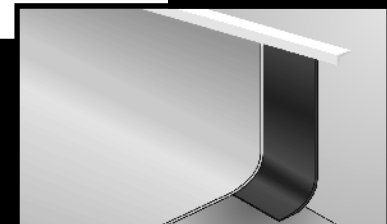
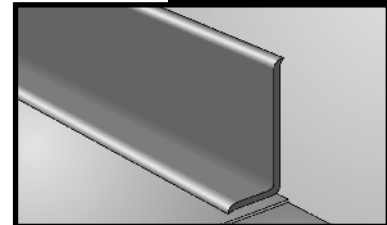
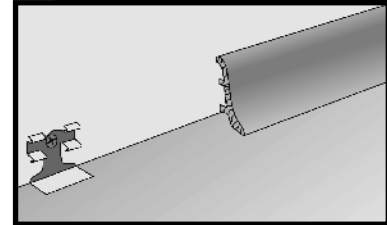
The result is an almost invisible and waterproof seam.

A successful cold welding procedure needs the tools on the picture. More information about the cold welding is available at the homepage www.mueller-pvc-naht.de.



Skirting

Plastic skirting is recommended for closing the edges along the walls.
If Vaporex damp proof membrane has been used, a 5 mm air gap should be left along the walls during installation of the skirting.

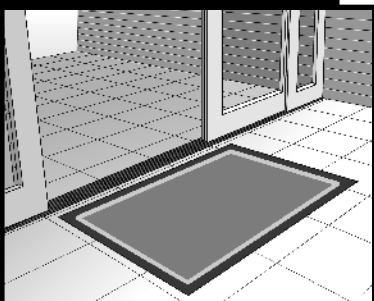


CLEANING AND MAINTENANCE

Cleaning and maintenance of the temporary floors

Vacuum or sweep your floor to remove dust. Wash the floor with warm water and an alkaline PVC-compatible flooring detergent. Always make sure you rinse your floor with clean water to avoid detergent residue build-up, which may cause your floor to become slippery.

Always let your floor dry before using it! If your floor is fixed using loose-lay installation, simply use a damp mop to avoid water seeping underneath the flooring.



Cleaning and maintenance of the semi-permanent and permanent floors

General Notes

Regular cleaning and maintenance are crucial for the durability and attractive appearance of your flooring.

Routine (daily) cleaning and periodical general maintenance are indispensable for preservation of the long-term appearance and performance of Grabo floor coverings installed by permanent method.

Apart from the approved maintenance products listed in this guide, other cleansers with similar parameters (chemical formulation and pH-value) are also compatible for use with Grabo Performance floorings.

Do not use cleaning products that could damage the surface, e.g. abrasive cleaners or organic solvent-based detergents. As a general rule, always follow the detergent manufacturers' instructions and contact them for additional details when required.

Cleaning and maintenance procedures for Grabo safety floorings are described in a separate user guide.

Preventive Measures

Most of the dirt, grit and moisture that will need to be cleaned from the floor surface arrive from the street. The majority of this soiling can be kept outside by using efficient dirt barrier systems of appropriate size. The maintenance regime depends to a great extent on how efficiently the dirt is stopped at the front door.

The newly installed floor covering needs a basic cleaning that should be later repeated between certain periods of use.

BASIC CLEANING (only for permanent floors)

- Remove loose debris, dirt and sand by sweeping and/or vacuum cleaning the surface.
- Remove the stubborn stains and built-up dirt.

Cleaning Chemicals and Equipment

- Highly alkaline basic cleanser (pH 13–14)
- Rotary single disc scrubber machine with a red cleaning pad
- Wet vacuum equipment
- Padmaster /scrubbing brush, floor squeegee (with rubber profile)
- Mop (e.g. Quick-Step large mop/dr.Schutz), microfiber head is recommended.

The use of power cleanser for basic cleaning helps to quickly and radically remove the built-in dirt. It is a water-soluble tenside based detergent (also available with disinfectant component).

Procedure

Apply the diluted cleanser to the surface of 5–10 m² and leave it for about 10–15 minutes to react with the soiling. Then machine scrub the floor, picks up the slurry, rinse thoroughly with clean water, pick up the water with a wet vacuum cleaner and mop to dry. The frequency of basic cleaning depends on the intensity of the floor covering use. Generally it is normal to perform a basic cleaning once in 1–3 months, depending on the intensity of use.

Daily Cleaning (for all application)

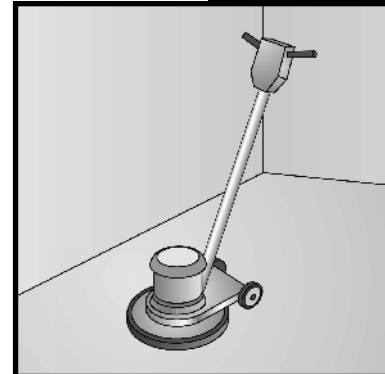
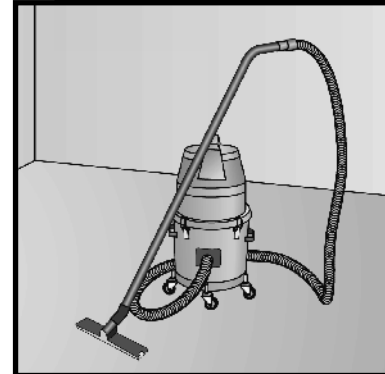
Vacuum or sweep your floor to remove dust. Wash the floor with warm water and an alkaline PVC-compatible flooring detergent. Always make sure you rinse your floor with clean water to avoid detergent residue build-up, which may cause your floor to become slippery.

Always let your floor dry before using it! If your floor is fixed using loose-lay installation, simply use a damp mop to avoid water seeping underneath the flooring.

The best way to thoroughly clean your permanent floor is to use an industrial floor-cleaning machine with a medium or light grade abrasive brush.

The mixture of body lotion, body grease and dust can make the floor slippery.

To remove the most common marks, we recommend that first you try commercial ammoniated cleaners that are compatible with vinyl floors. For harder marks to remove such as





rosin marks or heel and shoe marks, use methylated spirit. Make sure you immediately rinse the treated areas with clean water.

In the case of adhesive tapes residue can be removed with ether or, alternatively, with white spirit or methylated spirit. Make sure you immediately rinse the treated areas with clean water.

Avoid all chemicals which are wax-based. Avoid using strong solvents, such as paint thinner, petrol or acetone.

Cleaning Chemicals and Equipment

- Slightly alkaline cleanser (pH 8–10)
- Alcohol based cleanser
- Mop (e.g. Quick-Step large mop/dr.Schutz), with microfiber head.
- Padmaster /scrubbing brush, floor squeegee (with rubber profile)
- Brush scrubber dryer machine

Manual damp-mopping

The usual daily cleaning set includes a mop with a mop handle and a suitable cleanser. Use anionic detergent or non-anionic, tenside based alcohol cleanser to preserve the original shine of the floor covering surface and achieve quick drying leaving no streaks or dull film.

Use the two-bucket method for cleaning vinyl floors.

Apply a pH–10 detergent and a scrubbing brush to heavily soiled surfaces. Then rinse with clean water and wipe dry. Use green pad for the special small areas, like corners, skirtings.

Remove the shoe track and rest of glue with Elatex (dr Schutz) or Pro 40 (Henkel) with using white mop.

Then rinse with clean water and mop to dry.

Machine wet cleaning

Use a brush scrubber dryer machine for best results. Use a pH–10 detergent for cleaning heavily soiled surfaces. Then rinse with clean water and wipe dry.

Approved Cleansers

Manufacturer / Trade mark	Werner&Mertz GmbH	Dr. Schutz, Henkel
Basic cleaning	Quick-Stripper pH 13-14 concentration: 5-10 %	Super Basic Cleaner pH 14 concentration: 10% Add 100ml ELATEX to 10 litre Super Basic Cleaner solution! Pro 40/Henkel pH:10,3 concentration: 5-10%
Daily manual cleaning	SR 13 pH 9 concentration: 0,5 %	Active Cleaner R280 pH 8,5 concentration: 0,3-0,5%
Daily machine cleaning	Innomat pH 10 concentration: 0,3-0,5%	Floor Cleaner R 1000 pH 9,5 concentration: 0,3-0,5%
Stain Removal	Use ELATEX/dr Schutz or PRO 40/Henkel for removing shoe' traces, rubber marks and other stains.	

After removal of any stain always wipe the floor with clean water and a mop or a napkin.

Cleaning tools, machines

For basic cleaning:

Monodisc compact scrubbing machine with red pad (e.g.Kärcher BD40/12C or other similar type) wet vacuum cleaner.

For daily cleaning:

Roller brushed scrubbing and sucking machine with white or red pad (e.g.Kärcher BR 30/4C Bp Pack or other similar type).

Manual devices:

- Manual rubbing mop (Pad Master /dr.Schutz) with green and white heads.
- Mop with microfiber head
(e.g. Quick – Step Wide Mop/dr.Schutz or other similar mop).

PRODUCT - LAYING - WELDING - APPLICATION SUMMARY

PRODUCT	INSTALLATION METHOD			WELDING METHOD		APPLICATION	
	Loose-lay	Semi-permanent	Permanent	Hot welding	Cold welding	Portable	Permanent
Broadway 17	●	●●	●●●	●	●●●	●●	●●●
Broadway 20	●	●●	●●●	●	●●●	●●	●●●
Duett	●	●●	●●●	●	●●●	●●	●●●
Evidence 25		●	●●●	●●●	●●		●●●
Evidence 60		●	●●●	●●●	●●		●●●
Brillant		●●	●●●	●●●	●●		●●●
Unifloor 030/I	●●	●●	●●● (wall)		●●●	●●●	●●● (as wallcovering)
Acoustic 43 UNI		●●	●●●	●●●	●●		●●●
Las Vegas Lux	●●	●●	●●● (wall)		●●	●	●●● (as wallcovering)

● satisfactory
 ●● good
 ●●● excellent

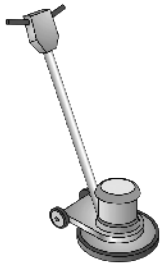
Tools and Equipments

For Grabo flooring products use tools and equipments provided by the Janser Company.

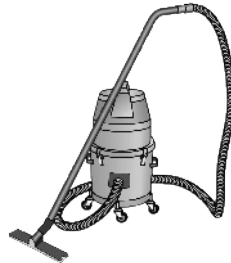
For details and a product catalogue visit www.janser.com

Sub-floor Preparation

- Rotary single disc polisher Columbus with accessories
- Industrial vacuum cleaner Janvac 1600
- Tools for stripping the existing floor covering (Compact stripper, Cosmo stripper)
- Equipment for structural moisture analysis (Hydromat CM-B or HB30)
- Equipment for measuring temperature and relative humidity (Digital Thermo-Hygrometer LVT10)
- Sub-floor hardness tester
- Hand mixer CX10 with suitable mixing blades
- Flat trowel



**Rotary single disc polisher
Columbus with accessories**



**Industrial vacuum cleaner
Janvac 1600**



**Tools for stripping the existing
floor covering
(Compact stripper, Cosmo stripper)**



**Hand mixer CX10
with suitable mixing blades**



Sub-floor hardness tester



**Equipment for structural
moisture analysis
(Hydromat CM-B or HB30)**



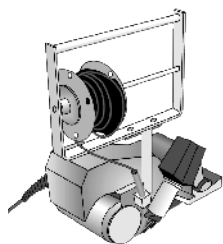
**Equipment for measuring
temperature and relative humidity
(Digital Thermo-Hygrometer LVT10)**



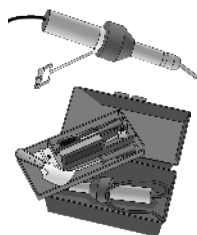
Flat trowel

Installation of the floor covering

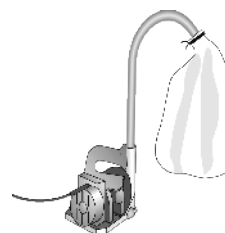
- Adhesive trowels
- Groover tool
- Joint strippers, joint trowels (for small and medium-size surfaces)
- Heat welding gun (Leister Triac S, Leister HOT-JET S)
- Automatic welding machine (Leister Unifloor – for larger surfaces)
- Standard welding nozzles (speed weld nozzle, universal nozzle)
- Weld trimmer
- Quarter moon knife
- Trimmer knife (for corners and edges)
- Cold welding set – Werner Mueller cold welding paste tube with nozzle, flipper knife, trapezoid blade, curled end quarter moon knife, masking paper tape
- GraboWeld welding rod for heat welding, round section, \varnothing 4 mm
- Safety cutter (Flipper 3000)
- Tape measure, rule, steel ruler
- Cork rubber pad
- Hand roller 50 kg



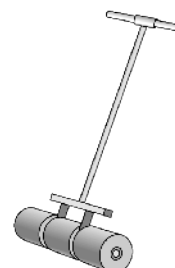
Automatic welding machine
(Leister Unifloor – for larger surfaces)



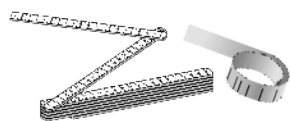
Heat welding gun
(Leister Triac S, Leister HOT-JET S)



Groover tool



Hand roller 50 kg



**Tape measure, rule,
steel ruler**



Trapezoid blade



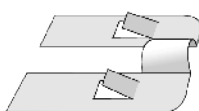
Hooked blade



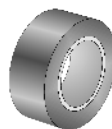
Safety cutter (Flipper 3000)



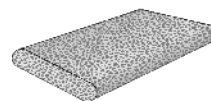
Adhesive trowels



Weld trimmer



Tape



Cork rubber pad



Joint trowels



Quarter moon knife



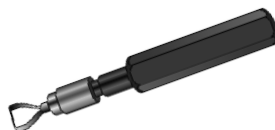
Standard welding nozzles
(speed weld nozzle, universal nozzle)



A2 serrated spatula
B1 serrated spatula



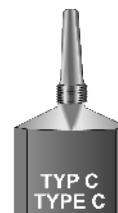
Joint strippers



Trimmer knife
(for corners and edges)



GraboWeld welding rod
for heat welding



Cold welding paste

technology

technology

performance

imate

technology

innovation

ultimate

ovation

performance

innovation

ultimate

hnology

technology

techno

performance

imate

ultima

innovation

ultimate

innovatic



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