Installation and Maintenance

Thermofix

PN 5411/2003

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1 General part

The specification is intended for laying components produced using the Thermofix technology.

High-quality components have the character of a luxury floor covering. As to appearance as service life, they comply with the most stringent assessment criteria.

The parts are manufactured in dimensions of 150x900 mm, 450x450 mm and 300x300 mm with samples imitating natural materials.

The floor covering is intended for all levels of load according to the classification described in ČSN EN 685 Standard. It can be applied in the fields of household use, commercial use and light industry.

1.1 Technical parameters

Total thickness	2.5 mm	2 mm
Useful layer thickness	0.8 mm	0.4 mm
Dimensions	150 x 900 mm	150 x 900 mm
	300 x 300 mm	300 x 300 mm
	450 x 450 mm	450 x 450 mm
Classification	Class 34, 43	Class 32, 41

Specific technical parameters are specified in the appropriate PN (Company Standard).

1.2 Packaging

	Dimensions (mm)	Quantity in Cardboard box		Quantity in Cardboard box (m^2)		Cardboard box Weight (kg)	
		Thickness 2.5 mm	Thickness 2 mm	Thickness 2.5 mm	Thickness 2 mm	Thickness 2.5 mm	Thickness 2 mm
Planks	150 x 900	26	32	3.51	4.32	13.50	14.00
Tiles	300 x 300	40	48	3.60	4.32	14.00	14.00
	450 x 450	20	24	4.05	4.86	14.60	14.60

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Substrates/Sub-floors

2.1 General

Site conditions must comply with the requirements of BS 8203:2001, the code of practise for the installation of floor coverings. it is normally the responsibility of the main building contractor to ensure the sub-floor in fit to receive a resilient (Thermofix) floor covering.

To ensure good quality appearance and adhesion, the sub-floor must be hard, smooth, clean, dry and free from defects. The floor larger should not proceed unless before are satisfied with these conditions. Use of suitable levelling compounds in accordance with manufacturer´s instructions will ensure that no irregularities show through the surface of the finished floor. For all installations FATRA recommends the use of cementing, water based levelling compounds. Direct to earth concrete and stone sub-floors must incorporate an effective damp proof membrane to ensure that they will always bee sufficiently dry.

New concrete sub-floor can contain a high percentage of residual moisture and should be allowed sufficient time to dry thoroughly.

When it is impractical to wait until the concrete base has fully dried, moisture content should not exceed of 0.5 %, the use of a suitable surface damp proof membrane (DPM) is acceptable. It must be noted that once fully cured the DPM must be primed before a water-based self levelling compound is applied. The supplier of the levelling compound will advise on a suitable primer.

Old concrete must be cleaned of all paint, grease, wax and any other foreign matter. A suitable levelling compound should be need to produce a smooth and level surface, with good bonding between concrete and levelling compound.

Inspection of the quality of the substrate surface must be carried out using the correct equipment.

- Smooth flat bottom 2 meters long with measuring wedges to check avenues
- Measuring apparatus to determine moisture content of sub-floor
- Thermometers and moisture-content indicators to measure humidity in rooms
- Visual inspection

2.2 Anhydrite substrates

Anhydrite screed (AFE) is made of an anhydrite binder, aggregates (sand, gravel) and water. Additives are in order to modify chemical of physical properties of the screed, e.g. workability, hardening or solidification.

The term “anhydrite screed” is often replaced by the term “calcium-sulphate screed”.

Whilst natural anhydrite was used as a binder, synthetic types of anhydrite are used more frequently today. A mixture of anhydrite and exciter is called an anhydrite binder.

Anhydrite screeds are being applied more often in buildings because of their easy and quick application.

AFE are applied as a liquid self-levelling mixture. With respect to the processing method, it is possible to guarantee uniform values of strength and evenness tolerances that are not attainable in the case of mixtures with lower amount of mixed water. Additional deformations that could occur during maturing of standard cement screed do not take place in the case of AFE. The possibility of formation of large areas without joints is another benefit.

It is necessary to point out that there are two disadvantages of applying floor coverings on AFE:

- screed moisture,
- surface strength.

Before applying a floor covering on AFE, the floor layer should observe the following instructions and principles.

An empiric rule is applied to determine the necessary drying time in order to achieve the acceptable residual moisture content of AFE with a thickness of up to 40 mm: approximately 1 week of drying for every 10 mm. If the thickness of AFE exceeds 40 mm, the drying time is prolonged more than proportionally, i.e. approximately two weeks for each additional 10 mm of screed thickness. These values obtained by practice assume standard climatic conditions. In case of abnormal climatic conditions such as high air humidity, the empiric rule mentioned above cannot be applied. The residual moisture content of AFE substrate may not exceed 0.5% CM before application of impermeable floor coverings e.g. Thermofix.

Electric moisture-content indicators are not suitable and can be used only to find out individual results.

CM method has to be used to determine the residual moisture content in the substrate.

The surface strength is to be assessed using a pour in test. If there are unstable and defective zones on the surface, it is necessary to repair them.

In any case, screed surfaces should be treated mechanically, e.g. by blasting or grinding to ensure a flat smooth finish.

2.3 Magnesite screeds

Magnesite screed is a product consisting of caustic magnesite, additives (silica, wood or cork powder) and aqueous solution of a salt. usually of magnesium chloride.

Caustic magnesite is finely milled stone powder that is products from natural magnesite.

Magnesite screed with the density of up to 1,600 kg/m^3 is called xylolite screed.

Single layer xylolite screeds are often used as a substrate for floor coverings; these may be applied after approximately three weeks provided the moisture content is lower than the value required by the standard.

Specification of sufficient maturity of magnesite screed for application of floor coverings requires considerable experience.

A softer substrate is often used under a relatively hard surface layers which are usually impregnated with wax or a similar agent. In both cases, it is necessary to prepare substrates for levelling with levelling material by removal of surface layers and using suitable penetration coats.

2.4 Chipboard and cement chipboard substrates

Large-format boards should not be thinner than 18 mm and their density should be at least 700 kg/m^3. We recommend using large-format boards with production dimensions of 1,200 x 2,400 mm or 2,4 mm.

The most suitable is the use of large-format components provided with a lock – tongue and groove or free groove and key. All joints must be filled with a suitable smoothing compound to ensure that good smooth quality surface is produced.

The boards have to be mounted to the substrate with a spacing of 350 mm with finishing nails or with screws with counter-sink head with the minimum length of 2.5 multiple of the board thickness of with driving in clips.

Components with a thickness of 18 mm can be used in case of floor beams with spacing up to 450 mm. In case of spacing of floor beams of 610 mm, components with a thickness of 22 mm have to be used. Chipboards and cement chipboards may not contain such binders that impair adhesion of floor covering.

2.5 Substrates of ceramic and cement floor files and cast terrazzo

All worn or damaged areas must be repaired. Loose jointing material should be removed from joints. It is necessary to degrease the surface using a degreasing agent soluble in water and to wash with a solution of washing soda dissolvent in hot water. The surface must be allowed to dry before application of a penetration coat and levelling compound with a thickness of approximately 3 mm. The surface can be scoured to improve adhesion of the levelling compound.

2.6 Substrates of old floor coverings

THERMOFIX floor coverings may not be applied on old floor coverings. If this is the case, the company Fatra refuses to bear any responsibility for the quality of the new floor covering.

All old floor coverings should be removed if possible including cement.

The removed old floor covering has to be disposed in an environmentally friendly way, e.g. by controlled incineration, dumping in a dumping site or recycling. It may never be bumt in the building site with other building waste.

It is necessary to apply a levelling layer with a thickness of approximately 3 mm with penetration suitable for non-suction substrates on the substrate.

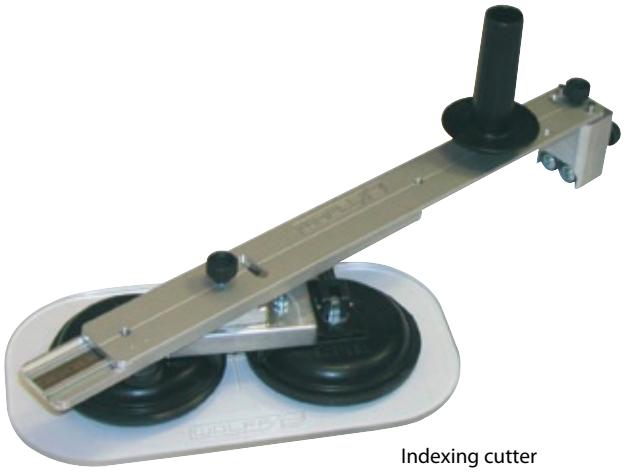
3

Tools and equipment

A qualified floor layer should be provided with a basic set of tools that should be kept clean and in good condition.

The specific selection of tools depends on the individual decision of the layer, the size of the installation and the extent of the required preparation.

The basic set of tools:



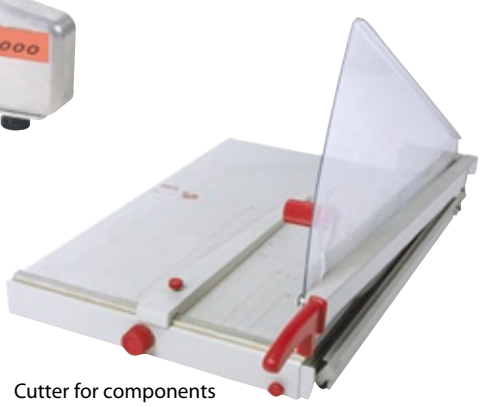
Indexing cutter

3.1 Substrate preparation

Large brush
Small brush
Shovel
Litter bin
Bucket for mixing smoothing material
Low-speed electric drill and mixing adapter
Smoothing trowel
De-aeration cylinder
Grinding stone
Vacuum cleaner

Steel circular spring band

Plane for edge chamfering



Cutter for components

Hand roller

3.2 Area measuring

Yardstick, ruler
Plotting string and chalk, vertical marking gauge
Pencil

Bar drawing instrument

Floor layer's knife - hook

3.3 Modification of dimensions

Floor layer's knives
Bar drawing instrument
Steel circular spring band
Compass
Circular knife for holes
Meter
Cutter for components
Circular cutter
Plane for floor component edge chamfering

Floor layer's knife - hook

Vertical marking gauge

3.4 Installation

Toothed filling knife
Hand roller
Sectional roller 68 kg

Toothed filling knife

Circular knife for holes

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Laying and fixing components

The following information is to be used as a guide. Under all circumstances, it is necessary to take into consideration the recommendations and instructions of the adhesive manufacturer. Use only tested and approved adhesives.

4.1 Substrate preparation before adhesion

Sub-floors should be fully mature and have the specified strength, be free of cracks and holes. They should be clean and free of dust, wax, grease, paints, varnishes, polishing agents, oils, hardening agents, packing materials and sealants as well as other materials which could adversely affect adhesion.

Evenness and moisture content of the floor have to comply with ČSN 74 4505 (limit deviation max. 2 mm/2 m). All prostrusions have to be levelled. All cracks and hollow pits have to be filled with high quality filling and levelling material. Products using plaster are unacceptable for preparation of substrate layers and should not be used. The surface of the base layer must be dry and moisture free over the course of time to ensure trouble-free performance of the floor. The maximum permissible moisture content is 4 percent.

4.2 Application of cement

As a rule, we recommend all flooring and adhesive be conditioned for at least 24 hours at a temperature exceeding 18°C before and during application, adhesive is to be applied using a toothed head (knife) of the correct dimensions and type as recommended by the manufacturer.

After applying adhesive on the substrate, let it cure before floor laying. This time is defined by the manufacturer of the adhesive and serves for the discharge of excessive moisture from the adhesive thus ensuring optimum adhesion. After reaching the optimum moisture content, the "open" or "working" time begins. The adhesive manufacturer defines this time as the open laying interval. Consider the open time given by the manufacturer of the adhesive to be an informative value. The open time can be affected by the porosity of the substrate, temperature and relative humidity

(Note: Definition of "open time" is – when adhesive is at a usable condition at it must be tacky.)

Do not apply more adhesive than it is required for application of the corresponding amount of floor covering during completion at the open time.

Excessive adhesive has to be removed from time to time. Water based adhesive can be removed easily using a clean moistened cloth. Dried water soluble adhesives can be removed with a small amount of solvent cleaning agent recommended by the manufacturer of the adhesive over use of this cleaning agent can cause decolouration and softening of the surface of components.

4.3 Floor rolling

Immediately after applying components, it is necessary to roll the material using a sectional roller with a weight of 68 kg. Rolling ensures good adhesive contact of tiles with the substrate, removes any trapped air and smoothes adhesive trowel marks.

In areas subject to excessive heat or moisture, for example adjacent to plate glass windows, exposed to sunlight, or in shower rooms a two part rigid contact adhesive is recommended.

Always comply and follow all relevant health and safety regulations relating to the use of adhesives.

4.4 Adhesives

There are many types of adhesives on the market and their suitability depends on a number of factors. Sub-floor composition, type of floor covering, conditions of the building site and floor operational conditions.

We recommend water based acrylic adhesives with a high initial tack.

Detailed data on the type of adhesive use, ventilation and open times, type of trowel storage conditions and safety regulations, etc. are included in the manufacturer technical specification sheets and packaging labels.

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Installation of components

5.1 Inspection of delivery

Before application, check the type number, batch number, quantity and whether boxes have been damaged.

After delivery at the building site, it is necessary to condition the components and adhesives to a working temperature of at least 18°C for at least 24 hours before application.

5.2 Conditioning components

The components have to be conditioned for at least 24 hours before application. Conditioning takes place in the room where the components should be installed at a temperature of 18 – 26 °C, maximum 5 boxes at tiles can be stacked on one another. This temperature may not drop during application and consequent 24 hours after work completing.

When installing on a substrate provided with a floor heating system, this heating should be turned off 48 hours before and 48 hours after installation. After turning on the floor heating system, the temperature of the system should be increased progressively, however, to a maximum of 28 °C. Adhesives intended for floor heating systems have to be used.

5.3 Laying of components

Check the condition of the sub-floor and remove faults (see Section 2.).

Check the moisture content in the substrate, note the results and the method used.

Before commencing application, we recommend performing a substrate acceptance inspection on the basis of a written record.

The regular shape of components can emphasize deviations with respect to the axes of the building, which underline the necessity to plan appearance carefully. We recommend starting the laying in the centre of the room. Lay components loosely with the aim of testing the final impression in order to achieve a satisfactory appearance of the floor from all viewing angles.

Tiles from three boxes should be mixed so, that shading, colouring and design repeats of the floor, gives a natural appearance.

5.4 Area measuring and marking

5.4.1 Measuring for laying tiles (Fig. 1)

- Measure the room in both directions.
- Mark the central line A-B perpendicular with respect to the wall with entrance door with chalk.
- Lay the components being along the central line A-B and check whether there are any resultant small pieces along the edges of the room. If this is the case, shift the central line in one or the other direction parallel with line A-B so that it would be necessary to modify end components only in a small extent.
- Mark the central line C-D perpendicular with respect to line A-B with chalk. Check the perpendicular status using a large angle, compass or protector.
- Lay the components loosely along the axial line C-D and check whether there are any places for small pieces along the edges of the room. if this is the case, shift line C-D in one or the other direction as described above.

5.4.2 Measuring for laying flooring boards (Fig. 2)

- Measure the room in both directions.
- Mark the central line A-B perpendicular with respect to the wall with entrance door and its centre with chalk.
- Lay the components loosely along the central line A-B and check whether there are any places for small pieces along the edges of the room. If this is the case, shift the central line in one or the other direction parallel with line A-B so that it would be necessary to modify end components only in a small extent.
- Check whether there are any remaining spaces for small components in the cross direction along the edges of the room. If this is the case, shift the central line A-B.

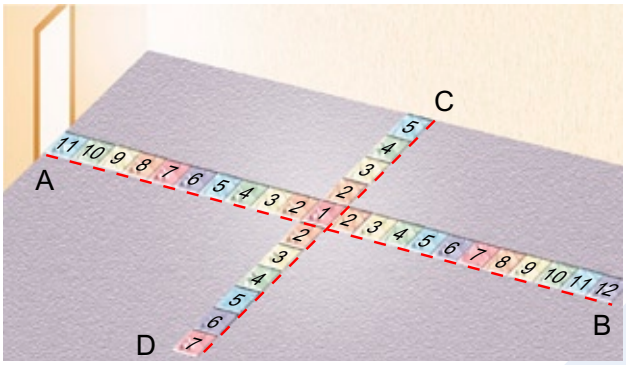

Fig. 1: Measuring for application of tiles

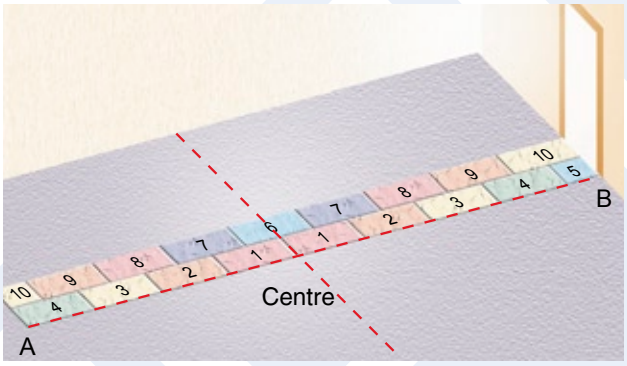

Fig. 2: Measuring for laying flooring boards

5.5 Installation of components

5.5.1 Installing the main field

5.5.1.1 Adhesion of tiles

The pattern on the tiles is formed by printing and the design effect can mean some tiles will have stronger print on them than others. To eliminate large areas of this effect it is necessary to unpack and mix the tiles prior to laying.

As soon as the adhesive is in a suitable condition, apply the first tile in the initial point, i.e. at the point of intersection of both axes. Press thoroughly in the centre of the component and to force the air out in the direction towards edges.

Fit another component with a potential alternation of colours and marbling and then place other components alternately from the left-hand and the right-hand sides. The components have to be set precisely along the line.

Proceed along the other line in the same way perpendicularly with respect to the first line. Then complete the whole section progressively from the axial lines. Take care of proper adhesion of the components. Remove excessive cement from time to time.

If a section is completed (excluding edge portions), it is necessary to roll it in both directions using the sectional roller of 68 kg. Repeat the procedure in individual sections until completing the main field (according to the size of the room).

5.5.1.2 Adhesion of wood planks

The pattern on the components is created randomly. To eliminate variations, it is necessary to unpack components and mix them while waiting for cement "fading". As soon as the cement is in a condition suitable for cementing, apply the first component at the initial point, i.e. in the centre of the room. Press thoroughly in the centre of the component and then force the air out with your finger or a roller in the direction towards the edges.

Place another component with potential alternation of colours and proceed along the axial line while applying two rows of components, each along one side of the line. The components have to be set precisely along the line.

Then complete the whole section progressively from the axial line. Take care of proper adhesion of the components. Remove excess adhesive from time to time.

If a section is completed (excluding edge portions), it is necessary to roll it in both directions using the sectional roller of 68 kg. Repeat the procedure in individual sections until completing the main field (according to the size of the room).

5.5.2 Cutting peripheral tiles

Different methods can be used to cut peripheral components. The appropriate method is usually selected according to ground plan shape and evenness of walls.

5.5.2.1 Overlapping method (Fig. 3)

To be used when the wall is parallel with the edge of the main field.

- Lay the tile to be cut precisely on the last applied tile so both colour and pattern orientation match.
- Lay another tile on the tile to be cut so that the external edge is leaning against the wall.
- Using the lower edge of the upper tile, mark a line on the tile to be cut.
- Cut the tile along the line, lay it freely in its position and check fitting.
- Repeat this procedure along the complete wall.

5.5.2.2 Method of a set of drawing instruments (Fig. 4)

To be used when the wall is not parallel with the edge of the main field.

- Lay the tile to be cut precisely on the last applied tile so both colour and pattern orientation match.
- Set the bar drawing instrument according to the dimension of the tile to be laid down.
- Transfer the wall profile on the tile to be cut, at the same time, it is necessary to hold the bar drawing instrument vertically and perpendicularly with respect to the component edge.
- Cut the tile along the line, lay it freely in its position and check fitting.
- Repeat this procedure along the complete wall.

5.5.2.3 Method of lever shears

To be used if the wall is parallel with the edge of the main field.

- Make sure the fixation plate on the bottom of the lever shears is free. Set the lever shears on the edge of the last

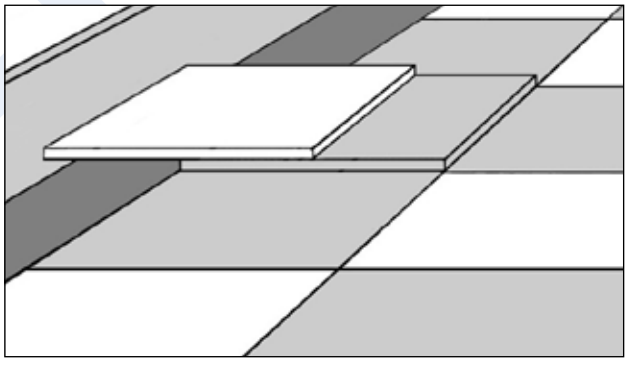

Fig. 3: Overlapping method

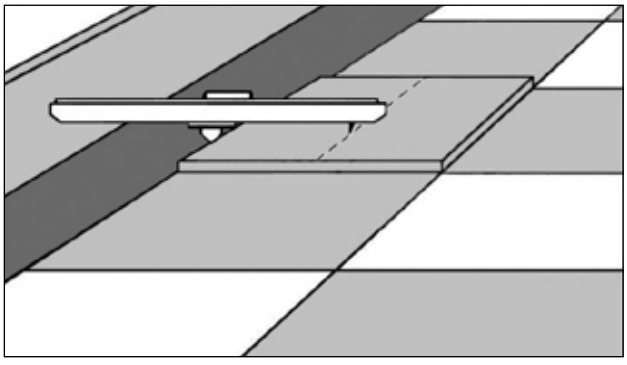

Fig. 4: Method of a set of drawing instruments

cut tile. Lower the fixation plate and set it on the tile edge. Pull back in order to fix the position.
- Put the tile in the lever shears with its upper side down and press so that the tile edge is snug against the wall. Take care to match both colour and pattern.
- Cut the tile according to the required dimensions by pressing cutting edge down using the handle.
- Check dimensions by applying tile in their places.
- Repeat procedure along the entire wall.

Note: *To copy protrusions such as door frames, it is possible to use both the overlapping method and a set of drawing instruments. A template can be made for complicated shapes.*

5.5.3 Cementing peripheral components

As soon as the wall row is measured and laid down loosely, turn all components (tiles) in the direction inside so as not to disturb their measuring.

Apply adhesive up to the edges. After adhesive fading, lay down the peripheral tiles. Remove excessive adhesive from time to time. Roll thoroughly using a sectional roller of 68 kg in both directions. Use a hand roller in inaccessible places. Repeat the procedure along all four walls. Roll the complete area again after 1 – 4 hours.

5.5.4 Laying components (tiles) in large areas

To keep straight line in case of large areas, proceed in the following way:
- Determine the initial central point in order to prevent large amounts of waste from peripheral components (see Section 5.4.1).
- Lay the first pyramid from the central line as indicated in Fig. 5 and Fig. 6.
- Repeat the procedure on the other side of the central line. Increase pyramids progressively until only the setting of peripheral tiles remains.
- Lay peripheral tiles (see Sections 5.5.2., 5.5.3.).

5.6 Finishing operations

There are no universal instructions for the best design procedure of floor covering installation. This depends in most cases on the imagination of the architect and the sill of the layer.

It is possible to list only some options how to finish off the floor.

Examples:
- Plastic strip
- Wooden strip
- Floor covering bands

This is preferable to protect the floor from heavy traffic for 24 hours after installation. Floors must next be washed for 48 hours. The ambient temperature during the working life of the floor should not exceed +5 °C and -40 °C

Quality inspection and floor assessment

ČSN 74 4505 applies to acceptance inspection of the floor. The appearance of the floor is to be assessed under daytime light from a height of 160 cm rather than under direct sunshine.

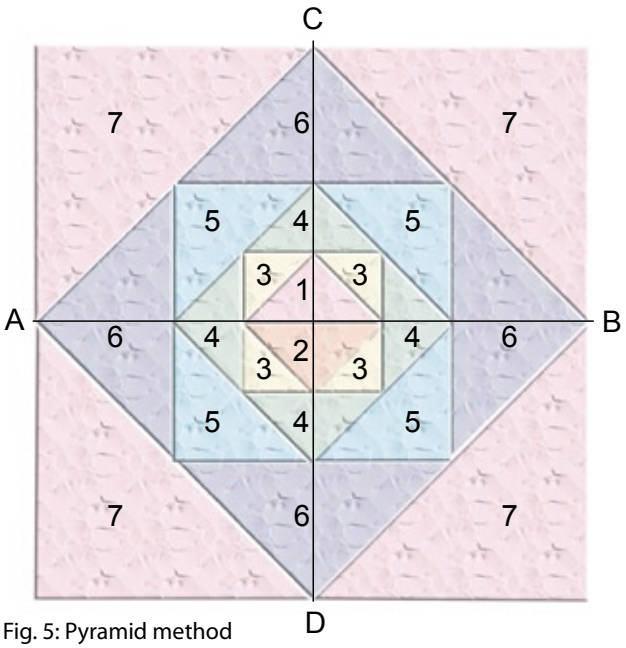

Fig. 5: Pyramid method

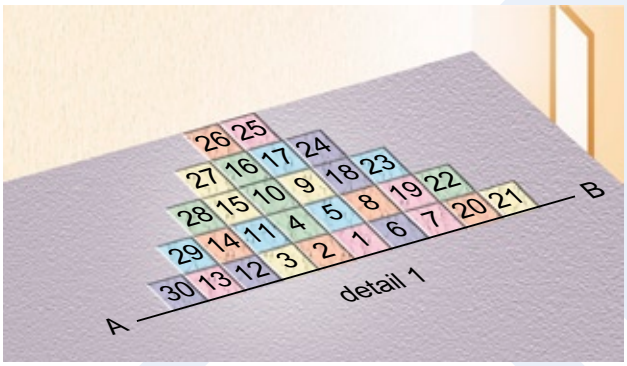

Fig. 6: Pyramid method – detail

7

Maintenance, treatment and renovation of floor coverings

Regular cleaning and maintenance is of high importance for all coverings as to appearance and service life. Floor coverings Thermofix are already equipped with a protective layer of PU varnish from production and it protects floor coverings against dirt penetration and it gives them regular and exactly definable look. As for such treated floor coverings, it is not necessary to carry out the so called first cleaning. Costs for other levels of cleaning, or intervals of these cleanings depend on the frequency of operation and the associated extent of the cleaned areas soiling. Through preventive measures, it is necessary to ensure that as little dirt as possible gets on the floor. If there are considerably loaded buildings, it is necessary to remember already during the designing to undertake effective measures to remove dirt at the entrance (cleaning area). Further on, it is necessary so that this cleaning area is included into common cleaning. If mats or carpets are used here, it is necessary to replace them as soon as they do not perform their functions to a sufficient extent.

Selection of a suitable floor covering belongs among the most important preventive measures as it has an effect on later costs for cleaning and treatment. Type of floor covering, its quality, design and colour play an important role. It is generally known: multicoloured patterns of floor coverings are less sensitive than single coloured light designs.

The following recommendations for cleaning and treatment of Thermofix floor coverings are based on long-term practical experience and correspond to the state-of-the-art. It is not possible to accept any guarantee for the mentioned above cleaning and maintenance means. In case of any doubts, the instructions of the appropriate manufacturer of cleaning agents are decisive.

7.1 Cleaning and maintenance of the floor coverings

When cleaning and maintaining Thermofix floor coverings, it is distinguished among:

- cleaning after building completion
- first treatment
- continuous renovation
- throughout renovation

Plastic floor coverings are ready to be used only after performed cleaning and after building completion.

7.1.1 Cleaning after building completion

Cleaning after building completion is performed as soon as the floor covering is applied. Dirt that got on the floor covering during and after application is removed with this cleaning. We recommend protecting already applied floor covering against damage by craftwork that follows with appropriate means, i.e. by covering the floor with paper cardboard and so on. It is necessary to adapt the costs and the cleaning method to the appropriate local conditions with respect to various types of dirt.

It is usually sufficient to use basic cleaning agents without solvents that are added to water in doses complying with the manufacturer's recommendations.

Apply the cleaning agent on the floor, clean it manually or use a cleaning device after the action interval that is recommended in the instructions of the manufacturer and remove the solution (wipe it away). Then wash the clean area thoroughly with clean water. In case of abnormal soiling and larger areas, it is always necessary to perform cleaning with using a mechanism (cleaning automatic machine).

Suitable recommended process (after building completion – it is possible to apply daily or according to the needs)

1. Install safety marking (warning boards "danger of slipping" and so on)
2. Remove and clean the mats and carpets from cleaning areas.
3. Move away free furniture and temporarily placed facilities and objects.
4. Remove dirt from hard-to-get-at places, i.e. with sweeping up or vacuuming.
5. Remove dust and mechanical impurities from the surface with a sweeping mop and remove adhered dirt scratching it with a plastic or wooden spatula.
6. Blend the cleaning agent according to the instructions on the product label.
7. Apply the automatic machine cleaning of the floor covering with a red pad. At the same time with the process of cleaning, collect the dirty solution from the floor area. It is necessary to collect the dirt with an appropriate cotton mop with hand cleaning.
8. Wipe out the edges of the cleaned area and gather excess water with the help of clean cotton mop and bucket and wring it. Let the floor dry.
9. Wipe out the dust with the help of a dust mop. Return the cleaned mats, free furniture and temporarily placed furniture and objects to their previous place.

*__Note:__ For cleaning after the building completion, it is possible to use commonly available cleaning agents that are defined by the manufacturer as suitable for cleaning and maintenance of PVC floor coverings with PU protective film.

7.1.2 Standard cleaning

Regular cleaning in the determined time intervals for a longer time is understood as standard cleaning. Generally, the following methods are distinguished:

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- **Moisture wiping**

A condition for use of this method is provision of the floor with a protective film. Dust and dirt is to be removed manually using a suitable method (sweeping or vacuuming) and means (dry sweeping mop, vacuum cleaner).

- **Wet wiping**

Even firmly adhered dirt can be removed by manual wet wiping if the floor is provided with a protective film. In case of more intensive soiling, a cleaning agent is to be added into water in accordance with the instructions of the manufacturer on the cleaning agent.

When using polishing agents, it is also necessary to perform treatment in addition to cleaning. There must not be any marks or adhered dirt on the clean areas.

It is not necessary to treat the Thermofix floor coverings with PU protective film. If, in spite of this, you decide to use maintenance agents, these must be labelled as suitable for PVC floor coverings with PU protective film by the manufacturer.

- **Polishing with polishing machines**

Machine treatment – polishing – can be used in larger buildings such as schools, hospitals, administrative buildings and wherever the machines can be used.

A cleaning and polishing agent is put on floor areas and immediately after it gets dry, it is cleaned with a slow moving cleaning machine with a polishing pad. It is cleaned and polished at the same time. A thin film of protective agent remains on the surface. of more intensive soiling an alkaline cleaning agent is to be added in water in accordance with the instructions of the manufacturer of the cleaning agent.

When using polishing agents, it is also necessary to perform treatment in addition to cleaning.

There may not be any marks and adhered dirt soft on the cleaned areas.

- **Polishing with polishing machines**

Machine treatment can be used in larger buildings such as schools, hospitals, administrative buildings and wherever machines can be used.

A cleaning and polishing agent is sprayed on floor areas and immediately cleaned with a slow moving machine with 3 m pads. Where greasy spills, exist a scrubber drier or rotary buffing machine with a blue 3 m pad is recommended.

Floors without dressing can be cleaned using a scrubber drier or rotary buffing machine filled with natural detergent and blue 3 m pads.

8

Resistance to chemical agents

The floor covering is characterized by a high resistance to weak and diluted acids, alkalis and soaps. Oil products and strong acids are not harmful if potential spillage is washed away immediately. Ketones, chlorinated solvents and other solvents may not come in contact with the floor covering. However, if this is the case, damage can be minimized by immediate washing with water. The floor covering may be used only after thorough evaporation of residues from the chemical agents.

Some chemical agents contain very strong pigments that create spots on the floor covering even after brief contact. Rubber products (mostly dark and colourful rubber – rubber disks, protectors of appliances, shoe soles, etc.) cause non-removable colour change of the walking area upon contact with the floor covering, which can result in yellowing, browning to blackening of the surface of the floor covering at the point of contact with the rubber product.

Wherever such types of materials are used, we recommend using a floor covering with dark colours to minimize the risk of stain formation.

Burning ans smothering objects leave non-removable spots on the surface.

The tables below provide an outline of general chemical resistance of floor coverings (description of the testing method – see note).

8.1 Organic substances

TYPE OF CHEMICAL AGENT	EFFECT	PROVISION
Aldehydes Esters Halogenated hydrocarbons Ketones	Floor covering is penetrated after several minutes	Wipe away immediately.
Alcohols Ethers Glycols Hydrocarbons (aromatic and aliphatic) Kerosene Edible oil	Release of plasticizers occurs after several days, which is accompanied by material shrinkage and brittleness.	Wipe away immediately.

8.2 Aqueous solutions

TYPE OF CHEMICAL AGENT	EFFECT	PROVISION
Weak acid and alkalis	No effect.	
Strong alkalis	They damage gloss and can cause discolouring of some shades.	Dilute and remove
Strong acids	Long contact can cause discolouring.	Dilute and remove immediately.
Pigments (indicative)	Contact can cause discolouring.	Dilute and remove immediately.

Note: *Resistance to chemical agents is to be tested in contact with a chemical agent for 24 hours under room temperature of 21 °C, washing with cold water then follows.*

The Fatra company wishes you pleasant work when applying our products.

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