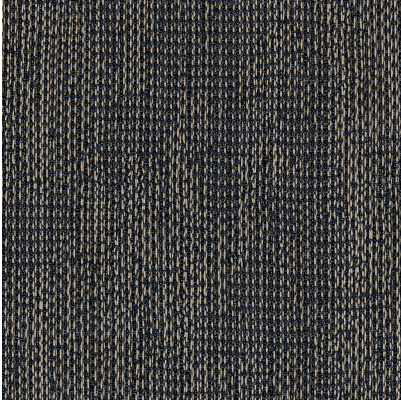




BRAVE OTTO | STAR 538 X 538 MM

GENERAL NOTES

ntgrate tiles and rolls should be placed in the room at least 24 hours before they are installed, allowing time for them to adapt to the room's subsequent operating temperature, which is between 18° C and 25°C (for klic between 19° C and 21°C).

Switch off any underfloor heating while laying ntgrate.

ntgrate must be placed as the FINAL part of the installation process and covered until just before use.

ntgrate products must be fitted by a professional who is experienced in placing flat woven vinyl flooring. ntgrate carpet is the best floor covering for elevated floors but ntgrate tiles (and rolls) should NEVER be placed on an old textile floor covering.

SUPPORT

Good preparation is of vital importance. The floor must be perfectly clean, free of cracks, dust and grease, pressure-resistant and permanently dry. Optimum levelling is necessary to obtain a good and long-lasting result: a flat, horizontal surface. The procedure is as follows in the case of a:

New-build project

- Check the **moisture level** of the screed. In the case of sand cement, this should be < 2%. Otherwise the tile installation operation should be postponed.
- Treat the surface with an **adhesive layer/primer**.
- Next, apply a **self-levelling levelling compound** at least 24 hours before installation. After it has dried, it should be sanded and vacuumed. Thorough **sanding** is required for an optically perfect result. Thorough **vacuuming** is required to ensure the glue adheres well to the levelling compound.

Renovation project

- Any remnants of the **previous flooring must be carefully removed** using grinding and vacuuming procedures.
- Where required, cracks and tears should be carefully **mended with a repair mortar** before treating the

LEOXX B.V.

Sasdijk 14, 8281 BM Genemuiden (NL)

T +31 30 635 10 00 | E info@leox.com | I www.leox.com

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surface with a **bi-component adhesive layer/primer**.

- Check to see if there is any **rising moisture**. Apply a liquid moisture barrier beforehand if necessary.
- Apply a **self-levelling levelling compound** at least 24 hours prior to installation. After it has dried, it should be sanded and vacuumed. Thorough **sanding** is required for an optically perfect result. Thorough **vacuuming** is required to ensure the glue adheres well to the levelling compound.

INSTALLATION

storage

The tiles, rolls and klic should be kept **in their original packaging and on the original Pallet** until they are placed. Otherwise, the boxes may be stacked on a flat base, up to 8 high. The boxes should be stacked "in straight piles". Rolls should be kept on a flat surface to avoid damage. Do not place heavy objects on the rolls .

They should be preferably transported with a forklift truck or a pallet truck. To avoid any damage, **never stack two pallets on top of each other**.

Check that the reference matches the order and **ensure that the batch numbers are identical** (BATCH). Only identical batch numbers may be placed in one room. (See BATCH on the label of each box). Check each ntgrate product for visual defects or damage prior to installing. When in doubt, get in touch before starting the installation.

Tiles should be acclimatized at least 24 hours before placement. To this end, place the tile boxes in a well-ventilated area and remove the lids of the tile boxes while they are being stored.

Indoor climate / underfloor heating. The tiles may be placed only if the following conditions are met: a ground temperature of at least 15°C (klic: 18°C), a room temperature of between 18°C and 25°C (klic: between 19°C and 21°C) and a relative humidity no higher than 75%. Take this into account in the case of underfloor heating.

Laying pattern

Tiles.

On the back of each tile, next to a letter A, B, C or D an arrow is also printed, indicating the direction of production. **This arrow is a guide for the installation.**

Choose a **suitable placement plan** with all the people concerned for the installation of the tiles.

Rolls. Do not mix different lot numbers in one room . Only rolls with the same lot number may be processed to ensure complete uniformity in color and aspect together (see BATCH NO indicated on each roll label) .

The sub-rolls must be installed in a sequence with :

- ascending serial number (see " SERIAL Nr .")
- and within a serial number with ascending sub roll no (see " SERIAL-SUB ROLL Nr ." Indicated on the label roll).

All rolls have to be installed in the same direction, look at the arrow on the back of the carpet.

Glue application.

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Tiles.

Check each tile for visible faults before cutting or gluing them. In the interests of safety, tiles should be glued not laid loose. Their very high dimensional stability means that ntgrate tiles do not need to be permanently glued but should only be fixed. An **anti-slip glue** can be used for this purpose, which has a permanently low adhesive power after drying.

This light-coloured glue should be applied sparingly to the floor using a maximum quantity of 80 g/m². The glue should be sufficiently dry (=TRANSPARENT) before installation. Otherwise an undesirable permanent bonding will be created. A well-applied anti-slip coating allows the tiles to be easily lifted and repositioned. Be sure to follow the glue manufacturer's instructions carefully at all times.

Ask your glue manufacturer about which glue is best to use, based on the backing of the floor covering and support concerned.

Roles.

ntgrate advises the use of an aqueous dispersion adhesive with very low emissions. The ntgrate Permanent Glue Rolls is a wet-bed adhesive and is not allowed to pre-dry. The ntgrate carpet must be laid in within 10 to 15 minutes after its application to the floor. Attention, if the glue has dried too long before the carpet was laid in, a good adhesion is not guaranteed. This can result, in the medium term, to open seams and premature wear. Approximately 350 g/m² of adhesive is applied. This is done with a trowel TBK A2. Be sure to follow the glue manufacturer's instructions carefully at all times.

Ask your glue manufacturer about which glue is best to use, based on the backing of the floor covering and support concerned.

Installation.

Tiles.

Do not mix different batch numbers in one room. Only tiles with the same batch number may be used together to ensure a completely uniform colour and appearance. The tiles should be placed in a sequence with:

- progressive serial numbers (see 'Batch' on the label of the box)
- and within one serial number with a progressive box number (see BOX N° on each label on the boxes)

Procedure

- **Step 1.** Start the installation by placing a tile in the door opening at the separating line of the rooms. Draw a line parallel to the wall from this tile. Then draw a line at right angles to the first one at a distance of several tiles away.
- **Step 2.** Apply the anti-slip glue evenly to the surface. Start the installation, after the glue has completely dried, from where the lines cross. Use a roller to press the joints evenly into the glue.
- **Step 3.** Place the first tile in a new row according to the separating line, and slide the next tile firmly into the corner formed by the tiles already placed. Finish one segment before starting the next.

Finishing the edges.

Step 1. Place the tile to be cut (2) on the last tile placed (1).

Step 2. Slide a third tile (3) against the wall.

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Step 3.1. Cut the tile to be placed (2) along the edge of (3)

Step 3.2. Place the visible part of the cut tile (2) against the wall.

N.B.: White fibres may sometimes be visible along the edges of the seams. These normally disappear by themselves during use. They may be wiped off with a damp cloth if necessary.

Rolls.

Visual inspection.

Check each roll for visual defects prior to installing. Visible faults have to be reported before cutting or installing the roll.

Seams.

Limit the number of seams to a minimum. In intense traffic areas, the direction of production, has to be installed in the direction of the highest traffic. Do not install seams near the entrance. Avoid head seams if this cannot be prevented use transition profiles. ntgrate is woven with yarn of which the core is made out of a white glass fiber. During the cutting of the seams, these fibers are sometimes up. These fibers will break and disappear automatically in use. You speed this up by rubbing with a damp cloth.

If a watertight installation is desired, the seams can be cold-welded, by using the Werner Muller type A product or an equivalent.

All designs in the collection are all-over designs that can be double cut. The blade of the knife should be very sharp and regularly changed.

Installing of the lanes

Fold back the two lanes in length, over about half of their width back. Draw a straight line, on both sides, as a starting point for the application of the adhesive. Lay the flooring into the wet adhesive and rub it with a beam of cork, from the middle of the lane, at an angle of 45 °, to the side; to remove all air bubbles. Take care for perfectly flat seams.

The installation may only be used 24 hours after installation, this assures that the adhesive has hardened sufficiently. Wet cleaning is allowed 72 hours after installation.

Attention: Some white fibres may appear at the seams. These will spontaneously break off during use.

GENERAL - KLIC

ntgrate klic has a number of important features, it shows:

- to be 100% **waterproof**
- **very good thermic insulating properties,**
- very good **acoustical** properties,
- the comfort and luxury of a textile floor covering,
- the high **wear resistance** and,
- easy **maintenance** of a vinyl floor,
- to be very easy to remove and re-install, without any damage.

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Although the planks are simple to install, thanks to the very good performing click system, we recommend that the installation of ntgrate Klic is to be performed by a **professional** who has experience with flat woven vinyl floor covering.

SUPPORT

An appropriate preparation is essential. The floor must be level, showing a max difference of 2 mm/m, clean, pressure-resistant and durable dry, to ensure a good and lasting result. The procedure is as follows in a:

New-build project

- Repair the screed were necessary.
- If the screed is not level enough, apply a self-levelling compound, at least 24 hours, prior to the installation.

Renovation project

- If the sub floor is in good condition, in case of, e.g. ceramic tiles, marble or granite floors, it does not need an additional preparation.
- Resilient and worn floor covering should be carefully removed, evt. followed by grinding, and vacuumed.
- If the subfloor is not level enough, apply a self-levelling compound, at least 24 hours, prior to the installation.

Installation.

Klic.

Do not mix different batch numbers in the same room. Only boards with the same batch number will guarantee total uniformity, both in colour and in aspect. Therefore, install the tiles in an order with:

- Ascending 'SERIAL Nr.' (See label on each box)
- and within one 'SERIAL Nr.' with ascending 'BOX Nr.' (See label on each box)

Fitting method

- The flooring must always be fitted in a floating way.
- Do not anchor the board with nails, screws or glues.
- Cut the necessary spacers of 5 x 5 cm from a board in advance. Cut a piece of 10 cm long, cut it in the middle. These pieces, one with a tongue and the other with a groove, may be used as a stop piece.
- Start the installation by laying the first board at a distance of 8 mm from both walls using spacers.
- Finish the first row of boards by cutting the last board, keeping a distance of 8mm to the wall.
- Start the second line using the remaining piece of the first and assure a stagger of the board of at least 30 cm
- Put the tongue of the panel in the groove of the installed one, under an angle of 20°, and lay down pushing it firmly into the groove.
- Close the head seams carefully by clicking in the stop piece and gently hammering on it. Do not hammer on the tongue.
- Finish the last row by sawing the boards in the length, assuring a distance to the wall of 10 mm.
- Profiles, type Schlüter, have to be installed at the doors and passages and in surfaces bigger than 150 m2. The same applies in areas where the length is superior to 15 m. and the width to 10 m.
- Remove the spacers after completion and install the skirting.

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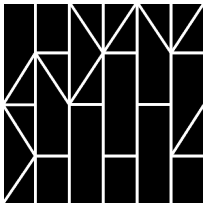
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Key items to consider.

- When **office chairs with swivel castors** are used, flooring is best protected with a plastic plate. In any case, hard castors at least 50mm in diameter and at least 20mm wide should be used.
- **Sharp objects** can damage ntgrate irreparably. Avoid this using appropriate protection of the floor and be sure not to use them for removal of stains.
- Always protect the floor when moving **furniture**. Lift the furniture or use Teflon pads.
- Contact with **rubber materials** should be avoided. Prolonged contact may cause the ntgrate flooring to discolour. In such situations the rubber is replaced by another plastic or a protection is applied.
- ntgrate **tiles** are not suitable for **outdoor applications**. Always use epoxy or comparable waterproof adhesives if ntgrate **Rolls** are installed outdoor. ntgrate **klic** is suitable for outdoor applications and wet areas.
- ntgrate is suitable for **underfloor heating**.
- The floor should not be used until 48 hours have elapsed after the tiles have been placed.
- The floor should **not be cleaned until 3 days after installation**.
- The flooring must be covered with cardboard or film immediately after installation to prevent damage, especially if work is subsequently carried out by third parties. Remove the cardboard or film if no further work is necessary.
- See our demonstration videos at www.ntgrate.eu

ntgrate's warranty for full or part reimbursement or replacement subsequent to a complaint will lapse if the above installation instructions are not strictly observed.

LAYING DIRECTION



In accordance
with laying pattern



View product

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