ATHENA
WOVEN VINYL

INSTALLATION INSTRUCTIONS

AND

CLEANING AND MAINTENANCE GUIDE

Athena Woven Vinyl
Installation Instructions and Cleaning and Maintenance Guide

1. PREPARATION

1.1 TRANSPORT, STORAGE, ACCLIMATISATION AND INSTALLATION CONDITIONS

Athena Woven Vinyl should be transported and stored in the original, unopened packaging in dry, warm conditions. Always lay boxes down on a flat surface avoiding impacts, particularly at the corners, from dropping or rough handling.

Acclimatisation and Installation should always be carried out in steady temperature and humidity conditions within the range of 18-27°C, and as close as practically possible to anticipated service conditions, which should also remain steady. The tiles must be acclimatised for a period of 48 hours on a flat surface and away from direct heat sources. The packages should be opened up and the contents spread out, not stacked up or standing on ends or edges, to allow air circulation around them.

1.1.1 SUB-FLOORS

Athena Woven Vinyl can be installed on most solid or timber floors. All sub-floors should be hard, flat, clean, dry, smooth, dust-free and soundly constructed.

Athena Woven Vinyl must be fully adhered to a smooth, hard, clean and permanently dry sub-floor with the appropriate recommended adhesive using a suitable notched spreading trowel. The finished appearance and long term performance will be affected by the quality of the surface directly underneath the tiles.

- Hard: able to resist indentation by point loads. Carpet/carpet tiles and other soft materials must be removed.
- Flat: no sharp undulations. Deflections should be less than 3mm under a metre straight edge.
- Clean: no loose debris and free from contamination containing solvents e.g. turpentine, heating oil, paraffin.
- Dry: NO SURFACE WATER and moisture content below 75% RH.
- Smooth: No ridges, steps, bumps, holes, gaps or sharp edges of any kind.
- Dust-free: thoroughly swept or preferably using a vacuum cleaner.
- Soundly constructed: loose, broken or springy floor boards should be secured or repaired; broken, badly cracked or crumbling concrete and loose/flaking screeds should be cut out and made good.

1.1.2 SUB-FLOOR PREPARATION AND SMOOTHING

In general, existing floor finishes and coverings should be removed. In particular loose-laid or floating finishes and soft finishes such as carpet or carpet tiles must be removed. Linoleum, PVC and other finishes may become loose if covered and cause the new floor installation to fail.

MOISTURE: In addition to a visual inspection ALL floors should be tested to ensure that they do not contain excessive moisture before installing *Athena Woven Vinyl*. For solid floor we recommend that a hygrometer test is made and that the resulting moisture level reading is less than 75% R.H. at 20°C. If the reading is higher, a damp-proof membrane (DPM) is required. N.B. Timber floors can also contain high levels of moisture as a result of water spillage, leaking pipes, floods, residual construction water, and lack of ventilation or high air humidity either from above or below.

1.1.3. SOLID FLOORS

Direct-to-earth (ground level) solid floors must incorporate an effective DPM and remain permanently dry at a level below 75% R.H. (as above). Suspended (above ground level) solid floors do not require a damp-proof membrane, but should have adequate ventilation below them and should also remain permanently dry, below 75% R.H.

Any existing floor-coverings should be removed together with residues of adhesive. If the surface is not smooth enough, a suitable floor smoothing screed should be applied at a nominal thickness of 3mm or more if the floor is very uneven. A primer should be applied first to ensure adequate adhesion of the screed and allow self-smoothing screeds to flow out correctly without premature absorption by the substrate. Sufficient time must be allowed for screeds to dry out before flooring is installed. In all cases the screed manufacturer's recommendations regarding application and drying times should be followed carefully.

Alternatively, on dry floors (including painted floors) and where appropriate, a floating underlay system such as can be used as an alternative to screed. Such underlayments can also provide sound reduction properties and allow for a fast-track installation.

1.1.4. FLOORING GRADE ASPHALT

To prevent discolouration or damage to the tiles and adverse effects on the adhesive from the active solvent content, asphalt should be smoothed over with a minimum 3mm of a suitable floor screeding compound. This will act as an isolating layer between the asphalt and the floor finish.

1.1.5. HARD FINISHES

Securely fixed ceramic, quarry tile, mosaic etc. Any loose/broken tiles or sections should be cut out and made good with a suitable proprietary floor smoothing compound, and grout lines should be filled. The surface must be free from any grease or contamination before a minimum 3mm of a suitable floor screeding compound is applied.

1.1.6.FLOOR PAINTS/EPOXY COATINGS

These must be securely bonded to the base concrete, any loose or flaking material should be removed and the edges filled/ smoothed over if required before a minimum 3mm of a suitable floor screeding compound is applied.

1.1.7. TIMBER FLOORS

Suspended timber floors (joists and boards) must have adequate ventilation below them to disperse any moisture and prevent dry-rot. At ground level they must have at least 150mm well ventilated void space below and an effective damp-proof course at contact points with supporting walls. Boards should be in good condition and securely fixed to the joists.

Floating timber floors at ground level (chipboard on insulation slab on concrete base) must be dry and have an effective damp-proof membrane incorporated into the concrete base. The decking boards should be well supported from below by the insulation material and without excessive flexing movement under traffic. All board joints should be securely glued together.

Badly uneven areas may require sanding down or levelling in with a suitable screeding compound. Timber floors should be overlaid with a good quality exterior grade ply-board, minimum thickness 6mm, to provide a smooth, even surface and prevent floorboard joints from showing through as lines or ridges in the finished floor. Ply-board joints should be positioned so as not to coincide with floorboard; annular nails or suitable divergent point flooring staples at minimum 150mm centres across the entire area should secure joints and every sheet. Nails or staples should finish flush or below the ply-board surface. Plyboard joints and nail heads may require filling with a suitable feather-edge smoothing compound, which must be allowed to dry.

1.1.8. UNDERFLOOR HEATING

In the event of installing over underfloor heating, either a high temperature, or epoxy adhesive must be used. There are various methods of installing underfloor heating and you should always check with the manufacturer that ***Athena Woven Vinyl*** is suitable for use with their system (there should be no reason for this not being the case). In the case of electrical underfloor heating, the wires or mesh should be buried in a suitable smoothing compound; it should then receive a further primer before a second smoothing compound is applied. In the case that the underfloor heating is a pipe system, then a primer and smoothing compound should be used as normal, whilst following the advice above in relation to adhesives and temperatures.

2. ADHESIVES

To reach a better adhesive result, please choose appropriate glue for different applications, uses and areas. Always follow user guides from the suppliers of adhesives.

2.1 COLD WELDED SEALER

For roll installation, all the joins must be sealed with cold welded sealer.

2.2 STAIR EDGE PROTECTION MOULD

When fixing to the stairs, a protection mould is required for the front edge of each stair. (See as Figure 1.)

3. INSTALLATION

We recommend professional flooring installers are used for ***Athena Woven Vinyl***. Our products are laid by gluing onto a dry and clean surface. This must be done at a temperature of 18 degrees Celsius or above. Please make sure all the flooring products are the same item and made from the same batch.

Always follow the lengthwise direction to avoid too many joint seams. Make sure the product is laid in the same direction. Refer to the arrow sign marked on the reverse of the product.

3.1 INSTALLING TILES

Following the instructions and using the correct notched trowel, spread the adhesive along the start line to cover a section of the floor that can be completed within the open time, i.e. before the adhesive has become too dry to bond correctly. Some adhesives must be covered with tiles immediately (wet-laid: see 2.1); others can be allowed to become "tacky" (dry a little) before covering (see 2.2), **FOLLOW THE ADHESIVE INSTRUCTIONS ON THE TUB.**

USEFUL TIP: when pressing tiles down by hand, always slide your hand towards the previously laid tiles. This will squeeze the tiles together and help to keep all the joints closed.

USEFUL TIP: When installing tiles, our recommended method is tessellation (turned at right angle; see Fig. 4a). However, if you intend to straight lay (see Fig. 4b, 4c and 4d) please be aware that due to the manufacturing process, the appearance of individual tiles will vary. This is a normal characteristic of a woven material and should be treated as such. We recommend mixing tiles from different boxes.

USEFUL TIP: Athena Woven Vinyl rolls and tiles differ from each other in thickness, typically by 0.5mm. When installing together, if needed we suggest a graduated 'ramp' of feather finish/skim coat be applied to the prepared subfloor, to negate any minute difference.

3.2 WET-LAID

Take care to avoid standing or kneeling on wet-laid tiles as they will slide out of position and also force adhesive up through the joints. Wet-laid tiles should be pressed down using light hand pressure only to exclude any air bubbles and achieve good overall contact with the adhesive.

USEFUL TIP: do not spread more adhesive than you can reach across, place the tiles in position and press down, then spread more adhesive and continue.

Do not slide the tiles into position. Remove any excess adhesive from the tile surface while still soft using a damp cloth.

TACKY: After spreading, the adhesive will need a few minutes to become tacky, depending on temperature and ventilation. The adhesive is tacky when the surface of the ridges has just dried to a touch-dry film but remains wet inside the ridges. Check this by placing a tile into the adhesive, pressing down firmly and peeling back immediately. There should be a ridge pattern of wet adhesive transferred onto the back of the tile. If not, the adhesive is too dry and must be re-applied.

USEFUL TIP: This is a much cleaner way to lay tiles with very little cleaning up. The tiles do not slide if stood on. Check frequently that the adhesive is still transferring to the tiles.

3.3 Measure the centre of the installation space and check the size of the selvage panel by drawing the first install line to get the biggest and even size of the selvage panel.

3.4 Repeat the same process to get the second line vertical to the first line and draw this second line. (See as Figure 2.)

3.5 To install from this cross section make sure each panel is firmly closed and straight to each panel otherwise it will affect the whole installation.

3.6 To cut the selvage panel can be difficult, so we suggest that it be cut before applying the adhesive. Cut and fit the edge pieces neatly against the walls as and when required. Check that the adhesive here has not become too dry. Check that no small trimmings or other waste fall onto the adhesive. When completed ensure that all tiles are well pressed down into the adhesive, a floor roller (see figure 3) is recommended for this. Leave the floor to set fully, approx. 24 hours, before resuming normal traffic.

3.7 Check the installation for any loose strands or frayed edges. These can be removed with a pair of cropping shears.

3.8 Below are some of the potential install designs. (See as Figure 4.) After installation, use minimum weight 75kg roller to run over all joints, vertical and horizontal. (See as Figure 3.)

3.9 Sealer protection: A suitable sealer protection can be applied if the installation requires it. Be sure not to walk on it before the sealer dries out. Please follow the instructions from the supplier of sealer.

figure 1

figure 2

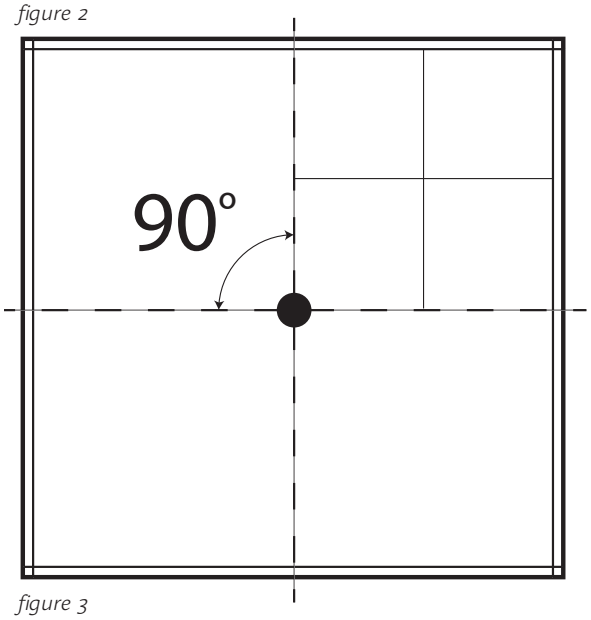


figure 3

figure 4a

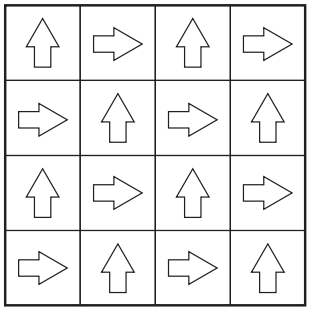
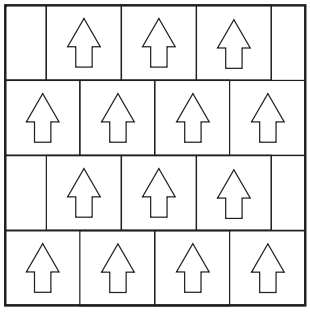


figure 4b



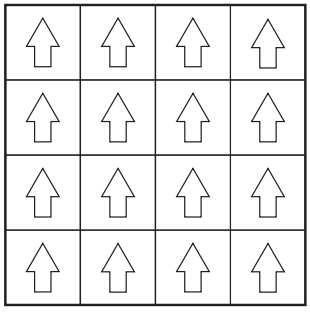


figure 4c

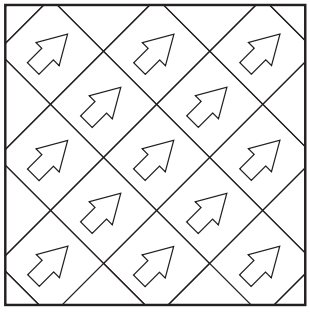


figure 4d

4. ROLL INSTALLATION

4.1 Roll packed products are finished in approx. 200cm width.

4.2 Always rolled out in the direction of length of the room. This will improve the appearance of the flooring and simplify the maintenance. Remember to avoid seams across the width of the roll.

USEFUL TIP: When installing sheet (roll) material, please take care to examine both edges to see if there is any 'excess' on the pattern. This can be the case with designs such as 'Chevron', and will need to be cut away when cutting into a wall or overlapped when being joined.

5.3 Draw a line 1.96m away from the wall. Spread the adhesive out evenly and stop 15cm from the line.

5.4 Allow the adhesive to aerate. Lay out the flooring and follow the line's outer edge. Smooth out any bubbles so that the flooring is even.

5.5 Repeat the same procedure (3+4) with the next line from the previous, so that the flooring overlaps by approx. 4cm.

5.6 Cut through both lengths in direction of the seam. Remove the surplus pieces. (See as Figure 5.)

5.7 For Stripe design, adjust the overlap to the pattern repeat then cut. (see as Figure 6.)

5.8 For Chevron design, half of the repeat is 75mm. The roll width is approx. 2090mm, overlap around 140mm, adjusted the repeat is 150mm across the length, then cut in the middle of the repeat. (See as Figure 7.)

5.9 Cold-welded sealing: We recommend working without masking tape when cold-welding woven vinyl material.

Because of the woven top layer of this kind of floor covering, the masking tape will most likely not adhere correctly and the welding liquid can penetrate under the tape. If the tape is lifted later on, it is impossible to dab the remaining cold welding liquid; the top layer literally melts and the seam is clearly visible. The seam area is welded but the visible result is poor.

We recommend, if the top layer of a floor covering is uneven and because of that it is likely that the tape will not stick properly, to work without the tape to weld and instantly dab instead. Best is if one person does the welding and another is dabbing, following the first with a bit of distance. This avoids unnecessary melting of the top layer and ensures the best results.

For dabbing, we recommend that tissue paper (dab with whole roll as long as the top layers are still soft and able to absorb the liquid and then removed used paper) is ideal to use, an uncoloured cotton cloth (colour in the cloth could stain the seam area) also works well, as long as it is clean and able to absorb the liquid. If the cloth has been used and if it is hard because of absorbed cold-welding liquid replace with a new one.

5. CLEAN UP AND FINAL FINISH

5.1 Use a white and damp clean cloth to wipe the surface of floor. Use mild/soft detergent when needed.

5.2 Vacuum clean the whole area to make ensure cleanliness.

5.3 We recommend covering the whole area with a floor protector, if other trades are continuing to work.

5.4 Commercial washing machine: We recommend using Karcher scrubber BR 30/4C or similar. To find more information: www.karcher.com.

HOW TO CARE AND MAINTAIN

- Correct maintenance of the product will extend the lifetime.
- To protect the surface of the floor, please do not place any sharp items on the floor.
- As for chair wheels we recommend the use of soft material, such as polyamide to prevent unnecessary tear or scratches.
- Wet cleaning: you may use warm water or gentle detergent cleaners (pH 7-8.5). Do not use acetone or polish that will damage the flooring.
- 85% of the dirt comes from outside/outdoor, so a well-functioning entrance mat system will be helpful to prevent the majority of dust and dirt being carried in.
- Our products can be cleaned either manually or in mechanical way. Frequently cleaning will help to extend the lifetime of the products.
- To remove different types of stains please follow these cleaning suggestions:
  - Warm water with heavy cleaners: coffee, juice, chocolate, cream and so on.
  - Cold water; perhaps with ammonia: blood.
  - Light acidic cleaner (pH 3-4); rust.
  - Hot water; glue (water based).
  - Chemically pure petrol; glue (solvent based).
  - Dry cloth; shoe/scuff marks.
  - Chewing gum; remover or ice spray: chewing gum.

figure 5

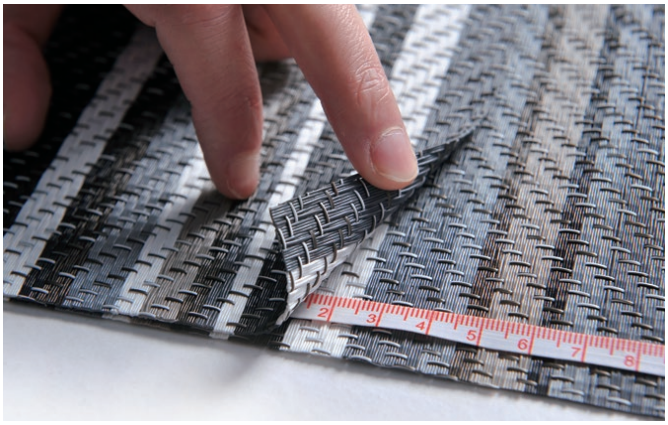


figure 6

figure 7

Karcher BR 30/4C