INTRODUCTION & AREAS OF USE:

Installation of Amtico tiles is straightforward, and follows the same guidelines that apply to all quality resilient tile floors. Amtico First is designed for light commercial use. Amtico International products are not suitable for external installation or in unheated locations. All 915x915mm (36x36") product should be installed in a tessellated format.

RECEIVING MATERIALS, CONDITIONING & STORAGE:

Before laying flooring, all materials must be checked to ensure that the batches are identical and free from defects. Complaints with regard to clearly identifiable defects cannot be accepted once the flooring has been laid.

Boxes of tiles should be removed from pallets and separated from one another as part of the acclimatisation process. Ensure that the heating/ air conditioning is fitted and operating. Alternatively, temporary heating or cooling may be used to maintain a constant temperature within the specified range.

Tiles, adhesive and subfloor must be allowed to stabilise to a constant temperature between 18°C-27°C for a period of at least 24 hours before, during and after installation. If tiles and adhesive have been stored outside of this temperature range, then it is recommended that acclimatisation is increased to 48 hours. Tiles must be stored flat and kept away from direct sunlight, heaters or air vents for proper conditioning.

Preparation and Installation should not begin until all other trades have been completed.

SUBFLOOR PREPARATION:

The suitability of subfloors and site conditions must be assessed prior to beginning an installation to ensure that they are in accordance with Amtico International and subfloor manufacturers' guidelines and national standards.

Good preparation is essential as the finished appearance of the floor will only be as good as the quality of the base and preparation over which it is installed. The base should be hard, smooth, clean, dry and free from defects. The surface should be even in order to achieve good fitting and adhesion. Any irregularities in the subfloor will show through the finished floor.

The guidance notes provided by Amtico International are intended to give general information on the methods that can be used to prepare various subfloor types. The quality and preparation of subfloors, testing for moisture content and relative humidity, and installation procedures must be in accordance with Amtico International technical guidelines and country specific standards (BS 8203 and BS 8204 for UK).

MOISTURE IN SUBFLOORS:

Moisture testing of all subfloors is essential before installation can begin. This is true of new and old buildings. Moisture testing must be carried out and recorded. All moisture tests must be undertaken in accordance with local regulations (e.g. BS 8203 for UK) and using an appropriate method to suit the subfloor type. The subfloor may be considered dry when the relative humidity is 75% or below. If readings are above this level, a surface damp proof membrane can be applied. Consult manufacturers for instructions. Alternatively subfloors can be given sufficient time to dry.

SUBFLOOR PREPARATION:

Concrete / Sand and Cement

Tiles must only be installed on suitably dry concrete or sand and cement subfloors. Drying time will depend on several conditions, including thickness of slab, location, type of construction, temperature and humidity. New concrete bases contain a high percentage of residual moisture.

Subfloors must be thoroughly mechanically cleaned of all paint, curing agents, grease, wax and any other foreign matter. The use of solvents to remove surface contaminants is not permitted. The floor must be hard, smooth, level and free from cracks. Use a suitable repair compound to fill grooves, cracks, holes and depressions. Please refer to section titled Levelling / Smoothing Compounds for Solid Subfloors.

Power Floated Concrete

Power floated concrete has a relatively non-absorbent, low porosity surface which will increase the drying time. It is not a suitable surface for direct application of adhesive. Surface laitance may also be produced by the power floating procedure. For these reasons, it is recommended that an appropriate method of mechanical preparation such as shot blasting or scarifying is used to prepare the surface. Please refer to section titled Levelling / Smoothing Compounds for Solid Subfloors.

Anhydrite (Calcium Sulphate)

Anhydrite screeds can be difficult to identify and can be mistaken for the more traditional cement based products. Provided ambient conditions are acceptable, anhydrite screeds dry at a similar rate to their cement-based counterparts. In the case of the floor screed not being sufficiently dry please consult the manufacturer on how to proceed, in most cases the screed should be allowed to dry out to an acceptable level. When the floor is sufficiently dry preparation can begin. Please refer to section titled Levelling / Smoothing Compounds for Solid Subfloors.

Asphalt

Mastic asphalt is normally applied between 15 and 20 mm thickness and sets to a dense hard mass which is impermeable to moisture and therefore forms an efficient damp-proof membrane. Mastic asphalt is often applied over an existing concrete base which lacks a conventional DPM. If the asphalt is cracked or damaged it will need to be repaired and damp proofing may be required. The asphalt will need to be cleaned before preparation can begin. Please refer to section titled Levelling / Smoothing Compounds for Solid Subfloors.

Levelling / Smoothing Compounds for Solid Subfloors

Most solid subfloors will require an application of a compatible compound to provide a hard, smooth and level surface to which adhesive and tiles can be applied.

The selection of a suitable compound is critical in determining the long term durability and appearance of the flooring system. Generally these compounds should be applied at a minimum of 3 mm thickness. The manufacturer of this compound can supply details of the product within their range that should be used to suit the end use application together with details of which primer should be used.

Expansion Joints

Expansion joints are incorporated into concrete floor slabs in order to permit movement without causing cracks to form. These joints should not be filled with smoothing compound or overlaid with Amtico floor coverings. In all cases they should be mirrored through to the surface.

Timber Floors

Existing Floorboards

Loose floor boards should be firmly nailed down and any damaged boards replaced. If necessary, the boards should be planed and/or levelled with a suitable levelling compound prior to covering with plywood. See section on Plywood Overlays. Wood subfloors that exhibit excessive deflection, or are "springy" or "give" when walked on are not suitable for installing Amtico tiles unless suitable remedial work is carried out.

Chipboard, Hardboard, Particleboard

Tiles should not be adhered directly to such subfloors whether they are free floating or fixed, and floors should always be overlaid with plywood prior to installation of tiles. See section on Plywood Overlays.

Wood Block Floors

Existing wood block floors laid onto a concrete base are unsatisfactory as an underlayment for resilient floors, even when plywood has been fitted. Such floors must be lifted and the subfloor suitably prepared.

Plywood Overlays

Plywood should be a minimum nominal thickness of 5.5 mm with a Plywood classification EN636-2 or 3, and a glue bond classification EN314-2 Class 3 Exterior. The thickness selected should be determined by the quality of the surface being covered. Panels should be acclimatised to the site conditions as recommended by the supplier. Plywood should be protected against damage or water prior to application.

The plywood should be laid in sheet sizes not exceeding 2440 x 1220 mm, and fixed using screws or ring shank nails. Fixings should be 2.5 times the depth of the plywood selected, but should not protrude below the timber base. Fixing should start at the centre of each sheet – screwing or nailing at 150 mm intervals at intermediate centres and at 100 mm centres along the perimeters with the fixing line 12 mm from the edge. All fixings should be finished flush with the surface. Joint lines should be staggered, and every effort made to prevent coincidence of joints in the sheets and the timber base.

We would recommend the use of a suitable compound to ensure the joints of the plywood and all fixings are not visible when the installation is complete. The manufacturer of this compound can supply details of the product within their range that should be used to suit the end use application together with details of which primer should be used.

OTHER SUBFLOOR TYPES

Existing Resilient Floors

It is recommended that Amtico products are not directly applied over existing resilient floors (with the exception of Amtico Access and Amtico Click). Generally, the old flooring should be removed and the base prepared to suit the type of subfloor uncovered. Please refer to relevant section.

Some older resilient tiles and adhesives can contain asbestos. In case of doubt, contact the relevant local authority for advice on their removal and disposal.

Terrazzo, Stone, Quarry tiles

Some existing flooring materials such as quarry tiles, ceramic or terrazzo may be suitable for the installation of Amtico tiles if properly prepared. These bases may be sufficiently porous to allow moisture to pass through to the back of the tile, and must be checked for moisture and damp-proofed if necessary. Worn and damaged areas must be repaired, including any tiles that are insecure, which must be removed.

The surface must be thoroughly cleaned of all sealants and varnishes, as well as foreign matter such as oil, grease, wax, etc. It is recommended that a suitable mechanical method is used to prepare the surface, as this will also provide a satisfactory surface ready for preparation. Please refer to section titled Levelling / Smoothing Compounds for Solid Subfloors.

Metal

(i) Direct Application

The metal surface should be cleaned/degreased and then prepared by grinding or scarifying to ensure that it is clean and free from any contamination, such as rust or metal oxide. It should then be mechanically abraded to give a surface key. Amtico tiles can then be installed onto the prepared surface using Amtico International Universal 2-Part Adhesive. Note that under no circumstances should a water-based adhesive be used for bonding directly to metal.

(ii) Indirect Application

The metal surface should be cleaned/degreased and then prepared by grinding or scarifying to ensure that it is clean and free from any contamination, such as rust or metal oxide. It should then be mechanically abraded to give a surface key. A suitable primer should be applied to the metal surface prior to putting down a suitable compound, which must be applied as recommended by the manufacturer. Once the levelling compound has dried, any adhesive from our range can potentially be used subject to the restrictions described in the Adhesive Section.

Raised Access Floors

Amtico tiles cannot be fitted directly to raised floor panels. Where this is required, the panels should be level and stable, and then overlaid with plywood, using appropriate fixings to suit the panels surface - see section on Plywood Overlays. Note that Amtico Access has been specifically developed for fitting directly onto raised access floor panels.

Underfloor Heating

There are various types of underfloor heating systems available – including hot water pipes embedded in the subfloor and electrical systems that can be laid onto the surface of the subfloor. In all cases, the temperature limitations are the same – the heating system must operate so that the temperature at the subfloor surface (i.e. the adhesive interface) should not exceed 27°C.

The heating system must be commissioned before the floor tiles are installed, to ensure that the subfloor is stable, the heating system is working as required with no leaks or cable breaks.

Underfloor heating should be switched off for 48 hours before, and should not be switched back on until 48 hours have elapsed after installation. It is recommended that the heating is slowly re-applied avoiding full operating temperature for 7 days.

With underfloor heating systems, it is the responsibility of the manufacturer and/or installer to recommend appropriate procedures and materials for producing a surface suitable for installing floor tiles. For electrical systems, this will require that the heating elements are fully embedded in a well- bonded and appropriate levelling compound, and that the temperature is adequately controlled to maintain the temperature at the subfloor surface at a maximum of 27°C.

Care should be taken in the placing of large insulating items such as rugs, beanbags and towels onto floors containing underfloor heating. This can result in localised "hot-spots" which may lead to discolouration of the tiles. No responsibility can be accepted under these circumstances.

INSTALLING TILE AND PLANKS TO WET AREAS:

The building code (E3 Internal moisture) identifies a bathroom, laundry, toilet or a kitchen as a 'wet area' where moisture may accumulate or be generated (sanitary fixtures). To prevent structural damage to the subfloor and meet conditions for health and safety, internal areas that accumulate moisture are to be constructed in a way to prevent moisture build up and fungal growth. Finished surfaces must be impervious, maintain the integrity of the system, and use materials and finishes suitable for wet areas.

- Two key areas that affect floor coverings are water splash or leaked water. These are referred to in E3 as:
  - Containing accidental water overflow (flood, leak).
  - Water Splash (e.g. outside area of a shower or bath)
- Any sanitary fitting in a room has the potential of water overflow or create splash back. To comply with the E3 2.1, containing accidental water overflow may be achieved by using impervious floor coverings which are continuous and coved or joints sealed where they meet the edges/wall.
- Adhesive systems used in wet areas must be able to provide assurance when applied correctly that timber substrates will not be damaged by any moisture or water that may seep through joins or at the edges of the area/room.

- These adhesives have been typically of polyurethane or epoxy type in nature, however with advances in adhesive technology there may be other alternatives recommended by adhesive suppliers.
- The adhesive should be an approved fit for purpose system that is compatible with the floor covering. If installers are not familiar with the adhesive system specified, then they should contact the supplier for further information. This may involve training if the system requires it for warranty purposes.
- Adhesive systems used in a residential kitchen and laundry should be able to sustain an accidental overflow situation.
- Where loose-lay planks or tiles with no impervious joining system are installed into a kitchen and laundry area over a timber board underlayment or structural sheet: hese are referred to in E3 as:
    - The surface should be first sealed with an approved coating that would make the board surface impervious to any water penetration or accidental overflow situation.
- For future reference and warranties, the identity of the manufacturer for any adhesive system used should be recorded in the customer file or included in the quotation to the customer.

Edge Sealing in Wet Area

Sealing the tile/plank floor walls/upstand joints involves applying a thin bead of a suitable type and colour/clear silicone then smoothing off with a profiled tool.

Fig 1

Setting the bead width

Fig 2

Finished transparent bead

Fig 3

Silicone to the shower/ floor junction

Fig 4

After fitted any excess silicone that squeezes up is removed

If any of these guidelines are not followed, a warranty claim may not be accepted.