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The CharmFloor Plug&Play coverings: Installation & Use Guide – release 2.

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This part of the manual is intended as a basic guide for installing CharmFloor.

Installation Guide

Installation index

- a) **PRECAUTIONS**
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The CharmFloor Plug&Play magnetics coverings are designed to eradicate the need for gluing. CharmFloor needs to be laid on clean, level, smooth, flat dust free, ideally new raised flooring to ensure the magnetic backing can take full effect.

The magnetic action is physically linked to the distance between the involved components, so meaning that the force of adhesion is dramatically affected by the increasing of the distance.

As consequence, to grant the better possible contact result, both top and bottom involved surfaces have to be perfectly levelled, flat, smooth, clean as well as free of any possible trace of dust or debris.

For the combining of above-mentioned reasons, the functionality of the whole CharmFloor original system could be jeopardized.

a) PRECAUTIONS

To prevent accidents and avoid damage to the floor, access by all persons except the floor installation team should be prohibited during the installation phase.

Ensure that no part of the CharmFloor installation is:

- Used as a workshop or as a platform for storage of equipment and materials.
- Permitted to be used trafficked by other trades until the main contractor has accepted responsibility for the installation.
- Subjected to static or dynamic loads, which exceed those for which it is designed.

b) SUITABLE SITE CHARACTERISTICS

Before starting installation, it is necessary to check that the site has suitable characteristics to receive all the materials required for installation:

- Suitable storage site, and installation area having a temperature between 5° and 35°C (15° to 25° C for CharmWood) with relative humidity between 40% and 75% (50% to 65% for CharmWood).
for CharmWood see also the bespoke notes below listed*
- After the delivery on site, the packing has to stay at least 2-3 days before use, so that the material can become acclimatized.
- The surface of the rooms where the CharmFloor will be installed must be perfectly levelled, flat, smooth, clean as well as free of any possible trace of dust or debris.
- Suitable haulage facilities must be provided to load the materials out.

c) LAY-OUT MARKING

To allow a faster installation and good results it is recommended to mark out the position of the starting grid before to start of the installation. The starting grid has to be accurately marked in order to avoid too small perimeter tiles, as small tiles have a small adhesion magnetic force and risk to become unstable.

d) INSTALLATION

Installation of the access floor system has to be made in accordance with the above mentioned. conditions. Once the layout of the CharmFloor has been decided, the installation can start.

It is mandatory to create and let a gap of 4/8 mm along all the perimeter shape, to allow any possible dilatation movement!

- Start the laying of the first entire CharmFloor tile, perfectly aligning it to the line created with a laser or previously marked with coloured chalk line.
- Proceed with the following tiles, aligning and putting them accurately in contact with each other, to avoid any possible gap between them.
- Complete operation with perimeter applications as follows. ;
 - Measure the distance from the last entire tile and the perimeter wall, trying to avoid to have any possible too small piece, benign conscientious that an expansion joint of 4/8 mm has to be forecasted.
 - Cut on size the perimeter tile and place them to fulfil the entire floor layout.
- Use the proper tools to cut each different CharmFloor's kind of tile.

- **CharmWood:** portable band saw or portable circular saw wood blade equipped, useful for all together wood and magnetic plastic backing.
- **CharmGres:** portable ceramic cutting carriage for the tile, and snap-off cutter/stanley knife for plastic edging and magnetic backing; a portable circular saw, ceramic blade or disk equipped could be an alternative useful for all together ceramic, edging and magnetic plastic backing.
- **CharmStone:** portable circular saw, stone/marble blade or disk equipped, useful for all together stone and magnetic plastic backing:
- **CharmPlus:** snap-off cutter/stanley knife.
- **CharmMetal.** portable circular saw, metal blade equipped, useful for all together metal and magnetic plastic backing.

Use Guide O&M

maintenance index

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The installed CharmFloor needs to be handled in a manner appropriate to its design. The following advisory information will facilitate its use and save time and unnecessary expense.

e) PROTECT THE FLOOR WHEN MOVING EQUIPMENTS

Adequate precautions, including the use of spreader plates, must be taken during the installation of materials and equipment.

The type of floor protection can only be determined by assessing the following factors:

- Gross weight.
- Distribution of the gross weight.
- Size and type of the wheel, castor or moving skate.

Various covering protections may be used depending upon the above. Typical materials are:

- Hardboard sheet.
- Plywood sheet.
- Various thickness of chipboard.
- Various thickness of steel or aluminium sheet.
- Correx sheet.

f) HANDLING

It is important that tiles are removed and replaced by lifting and lowering in the horizontal plane.

Do not remove tiles by using a 'hinged action' or by 'levering' with screwdrivers or similar.

Care should be taken to avoid damaging the magnetic backing and abs edging on perimeter's tiles (if applicable). If dislodged can be re-glued with a proprietary adhesive. Tiles should be carefully lifted and replaced in their original orientation.

According to the type of surface material, it may be found that lifting and repositioning the tiles is accomplished more easily by the use of two lifting devices, which allows the weight and balance to be more easily controlled.

Each tile should relocate, without the use of force, into its original position. If it fails to do so, remove it and investigate the reason.

Do not force tiles into position!

g) MAINTENANCE

The amount of maintenance likely to be required will depend on function and the type and volume of traffic across the floor.

To prevent small problems becoming serious, adjustments and repairs should be actioned as quickly as possible. The remedy may be as fast and simple as changing standard tiles in high traffic areas with others, which are in more remote positions. Should a tile show any sign of instability, investigate and rectify.

The effect of cut-outs on tiles.

Tiles with holes cut in them are inevitably of reduced strength. The amount by which the strength of a panel is reduced will depend on the shape and the position of the cut out and its dimensions.

There are multiple potential combinations of hole size and position that it is not possible to issue general information; rather each configuration needs to be considered on its merits.

Holes are cut in tiles normally for cable entry or ventilation. Cable entries are normally under machines and vents are more commonly in exposed positions.

Cable Entry

It is not recommended that the weight of heavy equipment is imposed on tiles containing cut-outs. In particular, there should be no excessive weight close to the cut-out itself. If it is unavoidable that the weight and the cut-out position are close together, it may be recommended that an extra pedestal(s) should be installed to transfer the weight axially down the pedestal(s) to the subfloor.

General

Caution should be exercised in placing tiles containing cut-outs in areas which are likely to be heavily trafficked by rolling loads. When equipment is being moved or manoeuvred, spreader plates should be used.

h) REMOVING AND REPLACING TILES SAFELY

Always use the correct lifting tool and ensure the lifting tool is in good condition and fit for the purpose. It is recommended that 2 panel lifters are eventually used as per the kind and weight of tiles. Place the lifters diagonally across the tiles and ensure that there is effective grip of suction.

Test the grip by pulling on the handles before starting to raise the tiles.

Raise the tile in a horizontal plane so that it will clear adjacent tiles without jamming and without the use of excessive force.

Once the tile is lifted clear of the floor surface rotate it through 45° and rest it on the surrounding tiles.

Some tiles do not have a smooth soffit. Take care to avoid scratching or indenting adjacent tiles by placing one on another.

Remove the lifting tools from the tile surface. Now lift and move the tile by holding the sides.

Before replacing a tile, to grant the better possible contact result, both top and bottom involved surfaces have to be perfectly levelled, flat, smooth, clean as well as free of any possible trace of dust or debris.

Replace the tile using enough lifting tools and offer it gently into the opening. It may need gentle hand pressure to press it home but should not be forced. If a tile will not go into place without resort to force, remove it again and investigate.

Failure to observe and implement the correct procedure may result in damage to the CharmFloor system. Damage to the flooring system will, in turn, affect its future performance and the longevity/warranty of the system.

i) MOVING HEAVY EQUIPMENT

Ensure that all tiles are in position and properly fitted. Investigate any rocking tiles or irregularities, which might indicate a loose substrate floor stability.

Overlay the route to be transited with protective covering. Secure it so that it cannot move horizontally. It is particularly important to prevent movement which could create a gap between boards, allowing the pallet truck or bogey to impact on the CharmFloor surface.

Take care to avoid impact loads!

Shunt loads which impose a sideways force should also be avoided, especially at and close to perimeters. It may be advisable, when perimeters are exposed on one or more sides (a loading bay, for example) to install a restraining system to enhance stability. Such enhancement could consist of additional pedestal base fixings, horizontal bracing of pedestals fixed at some point to the structure, diagonal bracing and screwing panels to pedestal heads.

Heavy loads on castors and small wheels should not be run across grilles, perforated panels, panels with service outlet boxes or grommets and other panels with cut-outs.

If in doubt, always consult with a representative of a recognised Raised Access Flooring Company for advice when heavy items of equipment are being moved on to, and across, the raised floor.

The floor surface may be damaged or indented by hard wheels, castors etc. when combined with heavy loads. An overlay will help prevent this.

l) MODIFICATION / DISPOSAL INSTRUCTIONS

If tiles need to be removed for access, or any damaged tiles need to be replaced, follow the maintenance and cleaning instructions.

No special requirements are necessary for the disposal of the floor panels.

m) CARE&CLEANING INSTRUCTIONS

The tile's connections are never sealed, as consequence, beside the kind of product, under no circumstances should liquids be used on the floor in a way which would damage the tiles or could seep between tiles and on to the below.

CharmGres&Stone

The CharmGres flooring system requires little maintenance, however there are some simple rules that are recommended.

The most important is to have a doormat or grate at the entrance, to stop dirt being brought inside.

This helps a great deal in keeping maintenance costs low and increases the durability of the floor. It is also important to place pads beneath the feet of furniture, tables and, chairs.

Solvent based polish or glazed varnishes; acetone or any type of solvent have to be avoided.

For the general cleaning the following method should be used.

Use a vacuum cleaner or broom or an electrostatic cloth to remove dust and dirt from the flooring.

For full cleaning and sanitation of CharmGres, use an appropriate limited quantity of detergent diluted in water, applied exclusively with a damp cloth or micro-fibre mop, immediately taking care to dry-up any possible excess of water.

In case of needing, and only for the involved areas, always taking care to don't give any chance to the products to leak through the tile's gaps, for the dirt from food (grease, oil and food) can be carefully used the "PS/87" produced by Fila, "DETERFLASH" produced by Geal, while for the inorganic dirt on rough materials can be used "DETERDEK" produced by Fila, or "SOLVACID" produced by Geal, or "KERANET" produced by Mapei, or "FLOOR CLEANER" produced by Faber chimica, or Cif Gel Liquid.

If floor-washing machines are used, we recommend low velocity cleaners.

CharmWood (bespoke notes*)

On site.

If the premises to be floored do not meet the minimum safety requirements, do not start laying the flooring. Remind your customer that keeping the environment as constant as possible within these values will help the wood, an organic material that is always alive, to avoid excessive and damaging climatic changes that would reduce its stability. Always leave at least 6 mm of expansion joint (8 mm in the case of floating installation) around the entire perimeter of the premises: walls, pipes, radiators, doors, etc. In particular, make sure that there are no poorly protected heating or air conditioning pipes in the subfloor: they must have sound and suitable thermal protection covering. Poorly protected hot pipes will cause shrinkage and/or distortion of the material. This check must be carried out by the client or the site manager during the laying of the floating floor, as it will be difficult to do so afterwards. After installation, do not artificially heat the rooms above 20-21°C during the dry season to prevent shrinkage and deformation of the material. During this period, it is strongly recommended to humidify the rooms to bring the R.H. (Relative Humidity) to the permitted values (50-65%). Before installation, check the individual elements in sunlight for defects or damage. No complaints will be accepted regarding obvious defects in materials that have already been installed. In the event of a complaint, the warranty and liability of the Company and its Distributors will be limited to the free replacement, ex our warehouse, of the panel recognised as defective and returned to us intact.

General notes.

The durability and mechanical resistance of a wooden floor, whether varnished or oiled, depend on proper and regular maintenance, which significantly extends the life of your floor. Our finishes are both sufficiently protected against agents such as dust or liquids, therefore cleaning and maintenance are easy to perform. No alkaline agents should be used for normal cleaning of wooden floors; this could cause severe 'yellowing' or other alterations to the colour. Excessive washing, which leaves excessive traces of water in the micro-cracks, could cause high liquid absorption, damaging the wood and blackening the joints. It is very important to remember that the best care and maintenance of parquet flooring begins before installation and continues uninterruptedly with timely prevention, especially by checking environmental values (e.g. room temperature and humidity). Keep in mind that high temperatures (22-24°C) in the dry winter months compromise the stability of your parquet, forcing it to lose some of its equilibrium moisture, causing cracks, expansion and/or warping. It should be noted that the higher the temperature, the greater the humidity must be, as wood is very sensitive to dry air. It is also worth remembering that wood is sensitive to cold and high humidity, especially when combined with a lack of air circulation. For raised floors, it is good practice to install ventilation grilles in each room so that air-conditioned air can circulate naturally under the floor. All necessary measures must be taken to ensure the correct levelling of the floor or covering, the precise distribution of the slabs, the protection and sealing of the perimeter cuts and the adequate horizontal locking of both the floor

panels and the covering slabs at the most convenient points and in any case around the entire perimeter. Correct installation by qualified installers and careful monitoring and adjustment of ambient temperature and humidity values, maintained by the user within normal values (18-20°C and 50-65% r.h.), will ensure a longer life for the varnished parquet in the best conditions, eliminating or significantly reducing such possible settling. Also remember to avoid sealing rooms during your absence, ensuring air circulation and an acceptable temperature, which are essential for the life of parquet flooring at any latitude.

Protection after installation

After installing the raised floor with parquet finish, it is essential to protect the entire surface so that other operators and installers can complete their work without damaging the floor. The use of plastic sheets or similar materials and adhesive tape of any kind to fix the protective covering directly to the wood is strongly discouraged. After carefully and thoroughly cleaning the floor surface, it must be covered with corrugated cardboard mats of suitable thickness and strength so that they are not torn by workers and their equipment. Take particular care not to leave screws, nails or processing residues on the floor, including copper wires and similar materials.

Protection from direct exposure to sunlight.

Oxidation is a property of wood that causes its pigmentation to change when exposed to air and light, so we can talk about photosensitivity as a characteristic that some woods have more than others. In many cases, oxidation is considered a virtue. For example, in teak, it increases the tones of the reflections and enhances the yellow colour. These variations are natural effects and therefore uncontrollable. Direct exposure of parquet floors to sunlight, as can happen near glass doors or windows, is, on the contrary, a danger to both the colour and stability of the wood. During direct exposure to the sun, as it is in closed and unventilated environments, the temperature of the wood far exceeds the maximum recommended temperature for the environment, which is 22°C. This causes the wood to dry out, resulting in deformation beyond what is acceptable for maintaining the functionality of the floor. Another significant negative effect is the discolouration and dulling of the wood's colour, which, even with special waxes, will not return to being uniform with the rest of the flooring. Damage occurs in wooden floors due to exposure to sunlight, whether the parquet has a varnish finish or an oil finish, with the latter being significantly greater. The use of suitable curtains and the aforementioned constant attention to controlling the temperature and humidity of the environment are recommended. Filtering polarised or shielded glass such as mirrored glass or similar is not sufficient.

Cleaning and maintenance combined in a single product.

Keeping your finished parquet flooring hygienically clean is easy: for daily cleaning, simply wipe with antistatic cloth and in a few minutes, you will have removed dust and the most superficial marks such as stains, shoe marks, etc. It is well known that rubber soles rubbed on acrylic varnish leave unsightly marks that are difficult to remove. The product 'FILA PARQUET NET' (or similar) quickly dissolves these marks. It is well known that rubber soles rubbed on acrylic varnish leave unsightly marks that are difficult to remove. The product 'FILA PARQUET NET' quickly dissolves these marks without damaging the varnish. Depending on the amount of foot traffic, once every fortnight, wipe the floor with a well-wrung floor cloth, especially at the sides to avoid water stagnating in the joints between the individual boards, using FILA PARQUET NET a solvent-free, non-slip product specifically designed for cleaning and nourishing our parquet flooring. Once the product has been spread evenly with a soft cloth, leave it to dry completely and then, if necessary, polish with a dry cloth to make the surface shiny. Check the quality of the water used because, if it is too calcareous, it can cause the surface to become opaque after drying, showing various marks: in this case, use distilled water. Remember that using too much cleaning and maintenance product will cause high dust absorption and increased slipperiness. In the latter case, the surface can be refreshed by polishing.

There is no need to wax varnished parquet, especially in the first few years of its life, during which the varnish is practically intact. When the surface is worn, you can restore its original splendour and shine, prolonging its life, by lightly sanding it and then applying a coat of our specific product, carried out by qualified personnel. As for oil-finished parquet, after 5-10 years it may be useful to apply a refreshing coat of oil to restore its original protection. For this purpose, if necessary, ask us for the necessary instructions. We recommend placing an effective doormat with good absorbent qualities in front of the entrance door: this will prevent small scratches in the paint in high-traffic areas, maintaining the uniformity of the surface. Apply adhesive felt pads under any objects placed on the parquet: furniture, chairs, tables, floor lamps, etc., to prevent sudden scratches and excessive wear; use rubber wheels for swivel chairs and/or trolleys, chests of drawers.

Gap between the boards.

All parquet flooring expands and contracts with changes in season and ambient humidity. When the environment is heated, the humidity level inside drops suddenly, so the boards release moisture into the environment and shrink, curling slightly and revealing cracks on the perimeter of the elements. In dry months, cracks can easily develop up to 2-3 millimetres wide in oak parquet flooring; in lighter species, the cracks are more visible to the eye. A similar reaction occurs when hot pipes installed in the subfloor are not adequately insulated and/or placed at the correct depth. Such cracks are to be expected as they are inherent to the type of material used, which is always alive and therefore reactive to environmental conditions, without forgetting that at the next change of season, i.e. when the ambient humidity returns to normal levels, they tend to close on their own. To eliminate or reduce the degree of change in the ambient humidity level, the property owner should artificially regulate the air humidity value by installing an ambient humidifier for this purpose.

Warping and expansion.

As with cracking, both warping and swelling are natural reactions to humidity and should not be a cause for concern if they occur only to a minor degree. More severe cases indicate a serious humidity-related problem. Warping is described as a condition in which the long sides of the boards are turned upwards and the centre is lower. Humidity is the primary cause, but warping can also occur as a result of water seeping in from the edges of the panels and being absorbed by the wood. Moisture causes the wood to swell, compressing the boards against each other and deforming the edges. To repair the parquet, you must first ascertain the source of the moisture. Usually, you need to check the humidity of the environment in which the wood is laid. Other causes may include situations such as leaks from pipes in the subfloor, which allow moisture to migrate to the surface and penetrate the wood. Even when laying parquet flooring on top of a steel floor, it is essential to measure the moisture level, as in many cases it may be excessive. Once the cause of the moisture has been eliminated, the warping can be eliminated. In many cases, the parquet dries naturally and improves over time. After the parquet has returned to normal moisture levels, i.e. the levels it was at in its original packaging, it may be necessary to apply a new coat of finish or lightly sand and refinish the panel floor.

Swelling.

Swelling is the opposite of warping: the centre of the panels is higher than the edges. This can happen when the floor surface encounters excessive moisture. More frequently, this occurs if the floor has been sanded too soon after warping. When this happens, the upper part of the perimeter length of the panels is sanded away, leaving them lower than the rest of the board when it returns to normal moisture levels.

Lifting.

Lifting is one of the most extreme reactions to moisture that can occur in parquet flooring. It happens when the parquet panels literally detach from the substrate to which they have been glued, lifting from the subfloor to a height of up to several centimetres.

Final reminder.

Check the moisture content carefully: it is the most important factor in preventing subsequent problems with your parquet flooring. Proper maintenance will also help you avoid problems. Here are the key points:

1. Clean your parquet with a cloth soaked in and thoroughly wrung out in the diluted solution of FILA PARQUET NET floor product (or similar), following the instructions for use.
2. Do not clean the parquet daily with the diluted solution, limiting the use to the real needed time.
3. Never clean with a cloth that is too wet: excessive water quickly deteriorates the wood because it can penetrate the micro-cracks that form between one board and another and can cause warping, swelling and chipping everywhere or only locally.
4. Do not allow water to flood the floor: if this happens, immediately remove all the water, avoiding stagnation around the edges, and remove the skirting board to help with this operation. Ventilate the rooms thoroughly until they are completely dry, avoiding the use of appliances such as heaters and dehumidifiers if possible. The aim is to restore the wood to a normal moisture balance level (7-11%) without creating excessive cracks.
5. Do not use abrasive or chemical products to clean the floor: use a damp cloth and a mild detergent.
6. Do not use products containing alcohol or solvents: these can damage the wood. The aim is to restore the wood to a normal equilibrium moisture content (7-11%) without causing excessive cracking.

CharmMetal

Clean by sweeping or vacuuming.

Any superficial stains may be removed using a fine water mist spray and wiping immediately with a dry cloth.

CharmPlus

The CharmPlus flooring system requires little maintenance, however there are some simple rules are recommended.

The most important is to have a doormat or grate at the entrance, to stop dirt being brought inside.

This helps a great deal in keeping maintenance costs low and increases the durability of the floor. It is also important to place pads beneath the feet of furniture, tables and, chairs.

Solvent based polish or glazed varnishes; acetone or any type of solvent have to be avoided.

For the general cleaning the following method should be used.

Use a vacuum cleaner or broom or an electrostatic cloth to remove dust and dirt from the flooring.

Wash the floor: for full cleaning and sanitation of CharmPlus, use an appropriate detergent diluted in water and applied only with a damp cloth or micro-fibre mop, immediately taking care to dry-up any possible excess of water.

We recommend the use of Emu-SF, a detergent specifically created for cleaning PVC flooring.

Allow the flooring to dry before opening the area for use.

EMU-SF is an excellent detergent for professional use; it reduces the build-up of dirt by forming a protective film which gives CharmPlus a natural sheen. Dilution: for ordinary cleaning, dilute approx. 50ml of Emu-SF per litre of water. For very dirty floors increase the dose up to approx. 150ml per litre of water. If floor-washing machines are used, we recommend low velocity cleaners.

THE PURPOSE OF THIS INFORMATION SHEET IS TO EXEMPT JVP SrL FROM ANY RESPONSIBILITY FOR DETERIORATION OF CHARMFLOOR PRODUCTS THAT COULD BE DUE TO FAILURE TO OBSERVE THE PRESCRIPTIONS, INSTRUCTIONS AND ADVICE FOR USE IT CONTAINS.