

# Installation Instructions

## Lumaflex Linosport Classic & xf<sup>2</sup>

Linoleum

23 05 2014

### **Nota Bene**

Lumaflex is a wooden system and as a natural and living material, wood is moving due to relative humidity (RH). The wood shrinks in dry conditions and it expands in high relative humidity. In areas where the wood has been influenced by high or low RH for a longer period, damage in the wood may arise. Therefore it is important to keep the RH in the hall between 40-60%.

In order to provide the customer with the best use of product, this installation guide has to be followed carefully to guarantee conformity and ensure sports performance. If not, Tarkett Sports will not be responsible for damages following installation.

Any use of the product for purposes other than the ones set out in the conditions of use should be submitted to Tarkett for prior approval.

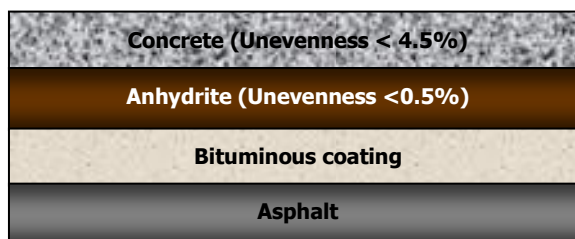
If you need any further information, please contact your dealer who will provide you with the appropriate advice.

### **THE SUB BASE – STANDARD NF P 90 202**

**Or in accordance with the current relevant standard within the country of use.**

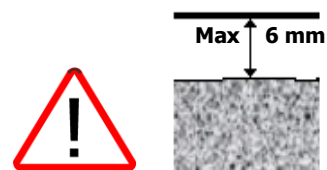
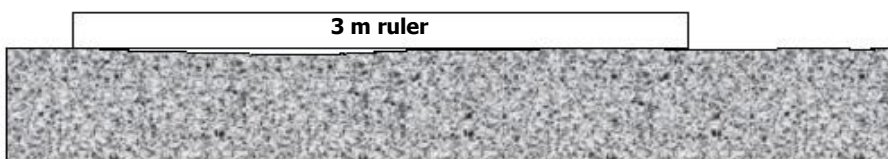
#### **1 – Moisture content of the sub base - Standard NF P90 202/§4.9.2 or relevant standard in the country**

The moisture rate in the screed must not exceed 4.5% in France, 2% with CCM method for example.



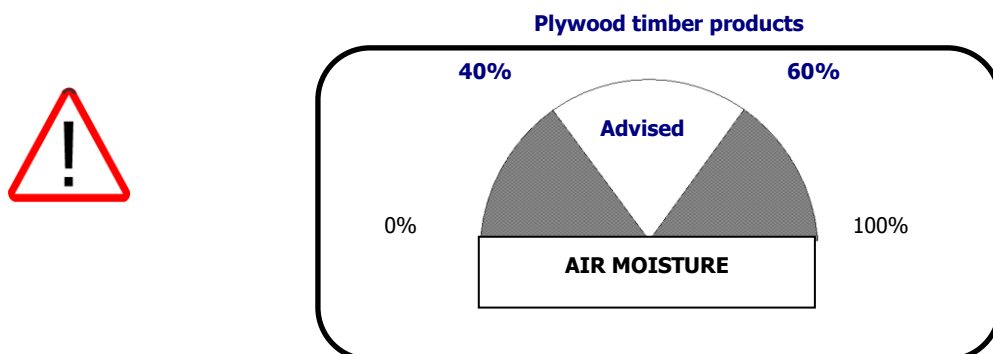
#### **2 – Floor Unevenness - Standard NF P90 202/§4.9.3 or relevant standard in the country**

It has to be checked to make sure all holes and bumps do not exceed 6mm height and depth under the 3m ruler.

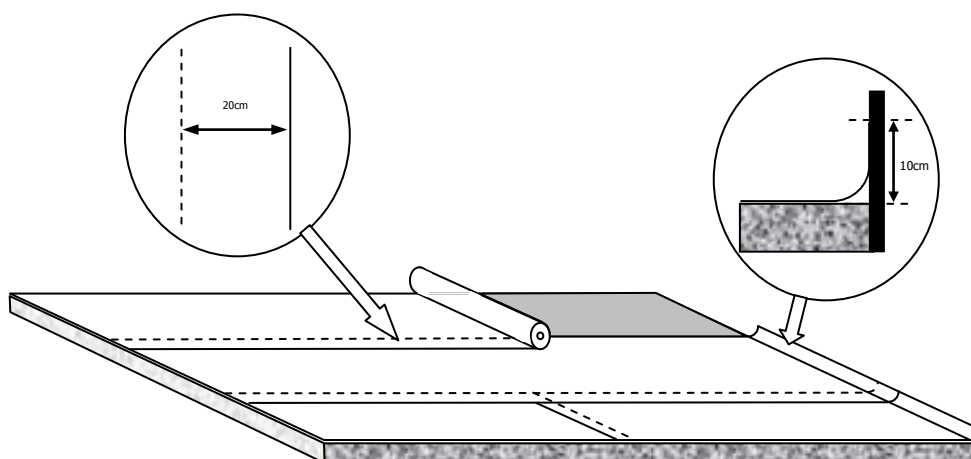


## Conditions during storage and installation of the Lumaflex sub construction

The timber products have to be stored on their wedges, in a dry, heated – between 15 and 20°C (between 59 °F and 68°F) - indoor area. The packages of timber products must not be opened before being installed. The temperature needed, in a room for a Lumaflex system should be between 15 and 20°C (between 59 °F and 68°F), the relative humidity must be between 40 and 60%.



## Laying the Tarfilm



Lay the first sheet on the ground. The second sheet is laid with 20cm overlapping the first, then tape the both sheets together. Do not forget to leave 10cm of Tarfilm along the edges against the walls.

Please note that on an asphalt screed or any other sub-floor with a risk of pollution or possible high humidity content, you will have to double the layers but in a 90° direction.

## Unrolling the Tarfoam 15mm

For a Lumaflex system installation, roll out the foam down the length or across the width of the area. We recommend unrolling on the width of the room, for those that are less or equal to 24 m width in order to avoid seams in short ends. In order to lock up the rolls in the short ends, we recommend taping the rolls one to another.

When you lay the foam you may have to cut a roll and to connect it with another, so you will have to overlap the first roll with an extra width of 10cm. Then the foam will have to rest 12 hours to adapt (without any storage on it), then you will be able to cut off the extra overlapping to get a flat aspect.

Do not forget to locate the centre of the anchors on the foam, that will help you to install the trap doors (see paragraph 7 "Fixing the trap door" picture 1).

**In door openings, leave a 10cm wide strip free from Tarfoam, this should be filled with a 15mm plywood for re-enforcement purposes. The same operation can be carried out to re-enforce parts that support heavy loads but you must keep in mind that these areas won't be in accordance with the EN14904 standard.**

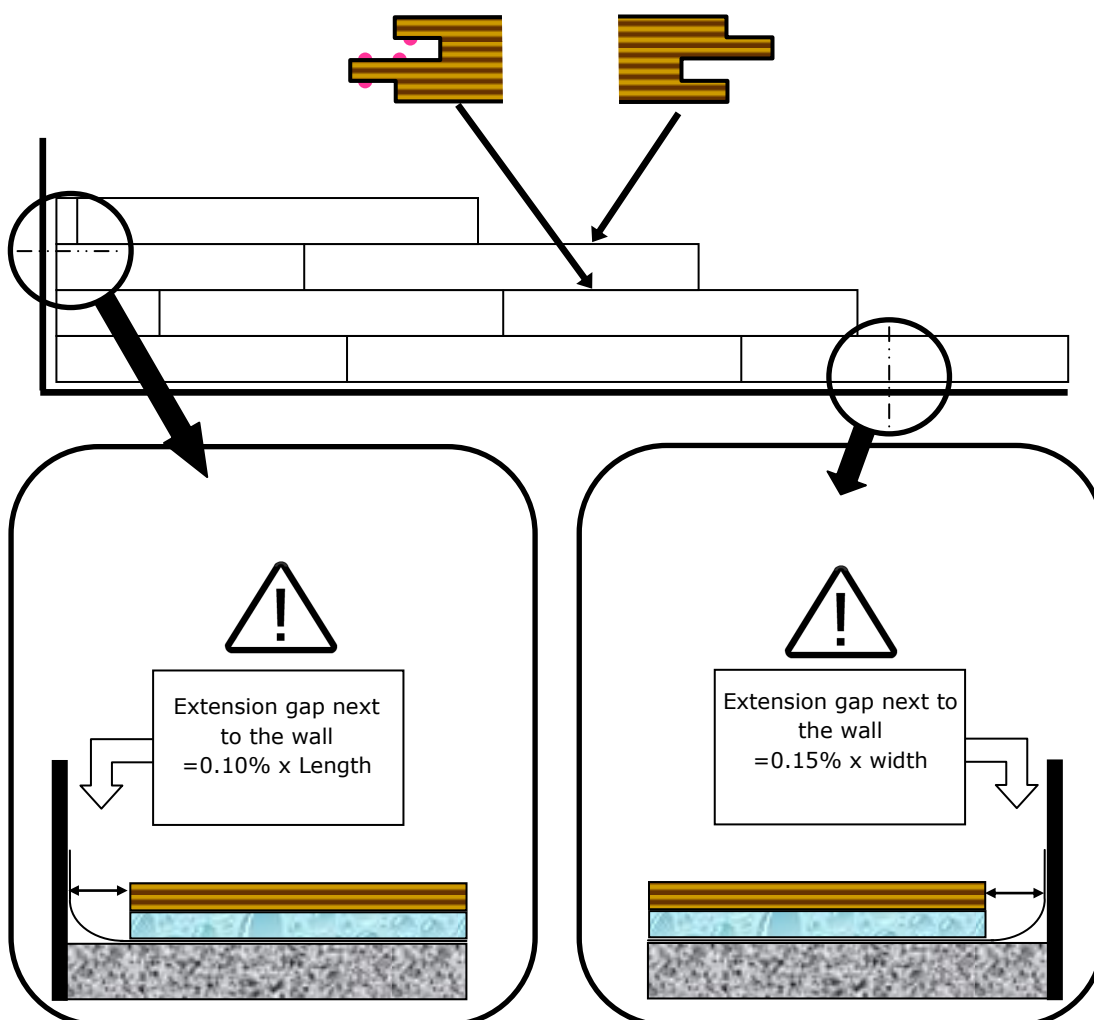
## Laying of Lumaflex Panels



Backside of the Lumaflex panel – this side must be installed on the foam

Cut the Lumaflex panels in order to obtain a homogeneous resistance before assembling (the 3 first strips on this photograph)

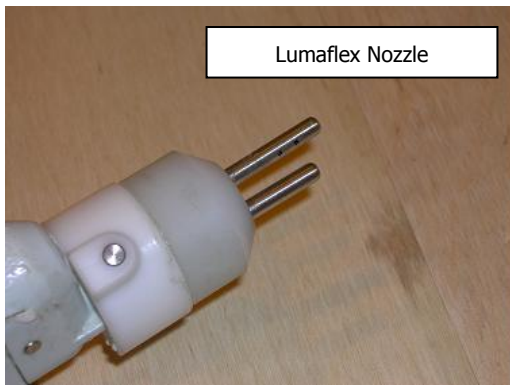
Laying process of the Lumaflex panels – Gluing tongues and grooves by using the Emfi special glue reference 863 sold by 10kgs seals – [www.emfi.com](http://www.emfi.com).



Check that the glue is well dispatched on tongue and groove.

A special nozzle can help to spread the Emfi special efficiently on the tongues and grooves – This accessory is available – ask Tarkett Sports.

This nozzle often has to be cleaned up in order to prevent this item from getting blocked up. The glue consumption is about 10kg for an area of 200sqm. You must check that you handle the correct quantity of glue to obtain a good adherence of the panels and a homogenous structure, if less glue is used, the fixing will be considered to be non-compliant.



Lumaflex Nozzle

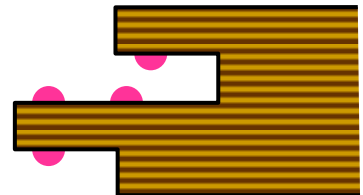
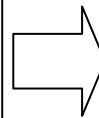


Glue applicator – manufacturer Lamello reference LK10 (=10kg)  
Pipe diameter 10 – 4m long – gluing gun ref. LK0  
Site: [www.lamello.com](http://www.lamello.com)

To use properly these items you need an compressor of 10 bars pression, with a tank capacity of 100liters and an air output of at least 275l per minute.



Don't forget to check constantly that the appropriate quantity of glue is applied.



During the installation and gluing of Lumaflex Duo strips, you will have to pay attention that:

- The strips must be edge to edge and absolutely no space must be tolerated between the strips (in length and width).
- The extra glue must be immediately removed after applying.

A sanding of the surface can be handled by using a scrubber in order to eliminate all surface defects.  
The use of a punctual screed as HB Füller TEC 900 DSP can be required if spaces between strips are observed.  
Follow the manufacturer recommendations.



## Preparing the base

A primer will be applied to seal the base as a precaution when installing on particle board.

If the wood base (Lumaflex) has adjustment defects (problems with the evenness and protrusions), the surface will have to be sanded with a floor buffer to limit tapping (as mentioned above in the Lumaflex installation instructions)

## Application temperature

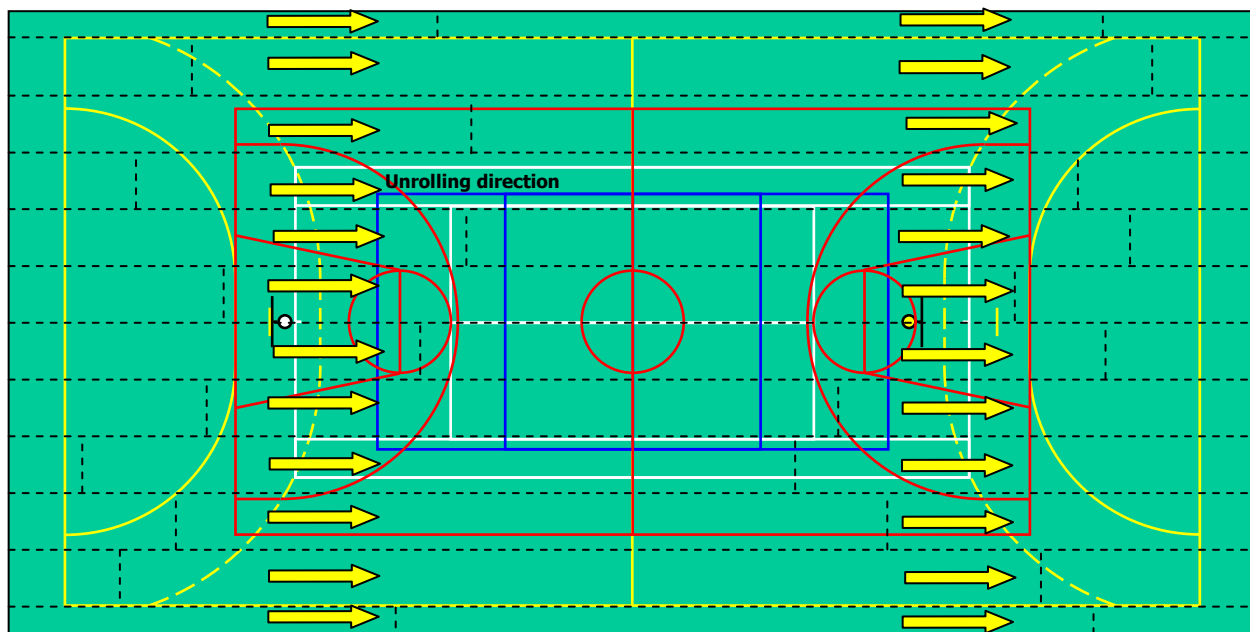
- On the floor > 15°C
- Ambient > 18°C

## Unrolling and storing rolls

- The Linoleum must be handled carefully between manufacture and installation. Avoid shocks, the rolls are stacked three high at most during transport. Under no circumstances should the rolls be stacked on top of each other for a long time in the gymnasium.
- Special care will be taken to avoid shocks at the roll selvage, given that the material is very heavy.
- Appropriate equipment is required to handle the rolls.
- If possible lay the rolls as and when they are unloaded to limit handling.

## Installing the sheets

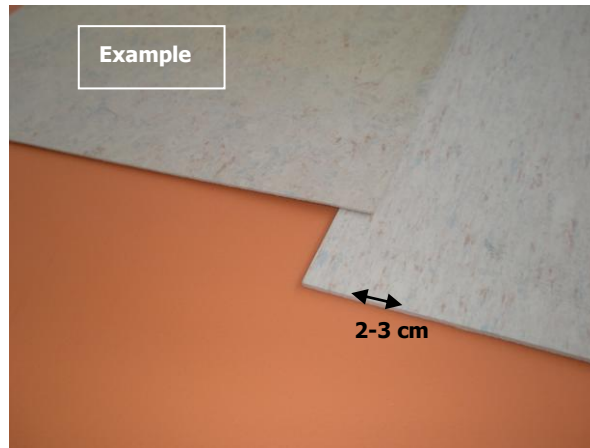
- Always work with rolls from the same batch number to avoid differences in colour or permitted thicknesses.
- Write the sheet number on the ground in its final position making sure that you keep the sheets in chronological order and by unrolling them in the same direction.



- Trace a line on the base to show the transverse and longitudinal centreline of the sports hall (always use a lead pencil to avoid risks of transfer onto the flooring after bonding).



- Start unrolling parallel to the longitudinal or transverse centreline. Unroll the other sheets side by side, overlapping them by 2 or 3 cm.



- Wait 24 hours so that the product is totally relaxed and at the correct temperature.
- Relax the sheets at the ends (do not force too much by pressing to avoid the risk of breaking or tearing the linoleum).



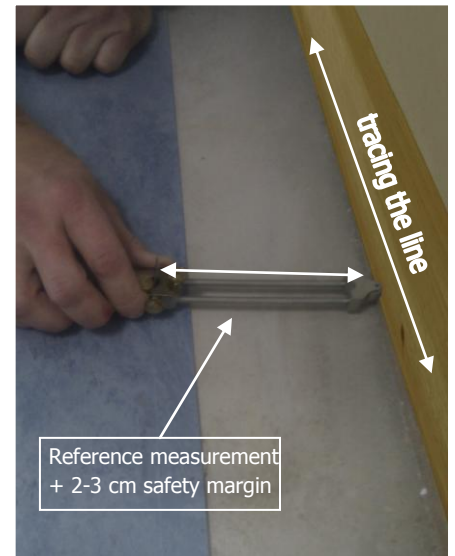
## Positioning and bonding the Linosport

**All sheets must be in position before bonding starts.**

- Using an edge cutter on all the sheets (except the edge butting up against the start and finish walls), trim the selvages.



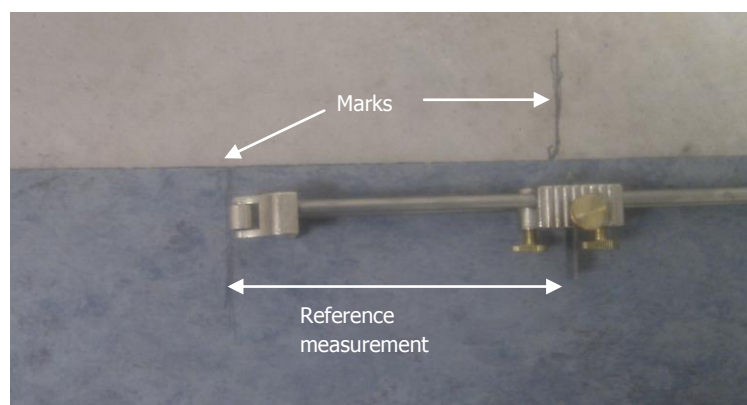
- The first sheet will be laid along the wall (a few centimetres away, with its two ends rising along the walls. Watch out for the expansion joint between the sub-base and the wall when laying down Lumaflex sub-base (refer to the Lumaflex installation instructions above).
- Using the large marking gauge (scriber) held perpendicular to the wall, trace its profile on the flooring (the reference measurement to be used on the large marking gauge will depend on whether there are obstacles along the wall. The blade will then be offset by the same amount. In all cases, a safety margin of 2 or 3 cm should be added to this reference measurement. This 2 or 3 cm will act as the reference measurement when there is no obstacle the length of the wall).



- Cut the flooring following the marking gauge line using a hook blade.
- Having cut the selvage against the wall, trace a pencil mark on the base and the selvage of the width located parallel to the wall.



- Offset the ends of widths from the wall and use the distance created between the two marks as a reference for the large marking gauge (scriber).



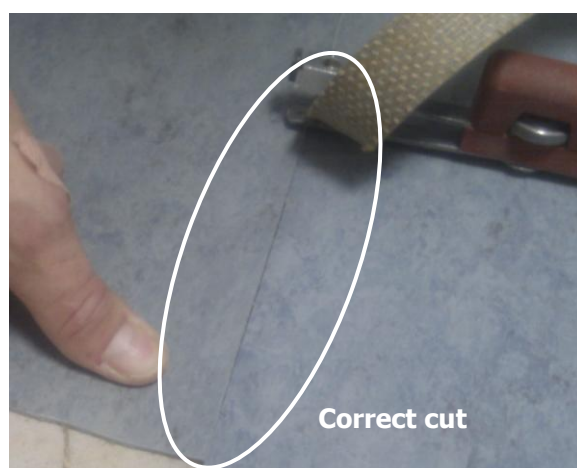
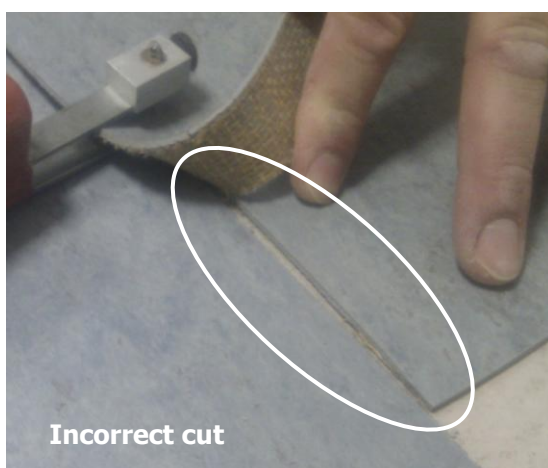
- Using the large marking gauge (scriber) held perpendicular to the wall, trace its profile on the flooring.
- Cut the flooring following the marking gauge line using a hook blade.
- Adjust the sheet against the wall, lining up the two marks.
- The next sheets should overlap the previous ones by 2 or 3 cm (selvages lengthwise and heading joints).
- The last sheet against the opposite wall will be cut in the same way as for the first one.

## Bonding the sheets

- Start with the last sheet (as the sheets have been laid overlapping by 2 or 3 cm, the last ones laid will be the only ones which can be folded back freely).
- It is possible to work three widths by three widths in large halls.
- Trace a line on the ground the length of the trimmed width selvage, fold the sheet back on itself halfway and trace a new line in the fold, starting with the edge opposite the wall across the entire width.
- Apply the specific adhesive for Linoleum on the floor (approx. 350g/m<sup>2</sup> with B1 spatula), between the marks.
- Having applied the adhesive, respect the gumming time (follow the adhesive manufacturer's instructions).
- Fold back the sheets.
- Cut the edges\* covering the next sheet with the joint marking gauge.

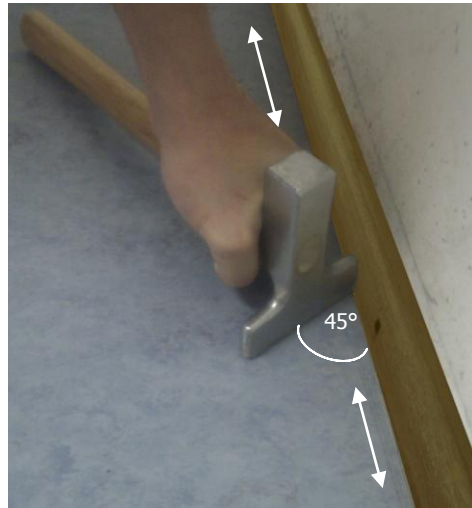


*\*Before cutting the width edges, test that the joint marking gauge is adjusted properly.*





- Bind the joints and ends with the lino hammer at an angle of 45° to the next sheet



- Continue gluing the next sheets (always by halves)
- Once all the half widths have been glued, do the same with the other half of the sheets.
- Back with a cylinder widthwise then lengthwise, whilst scribing at the same time (the selvage of the glued sheets will guide the joint tracing tool - joint marking gauge).
- Bind the joint with the linoleum hammer

### If layout plan

- Proceed in the same way starting from the longitudinal or transverse centreline and placing the sheets on each side, after trimming the same amount on both sheets.

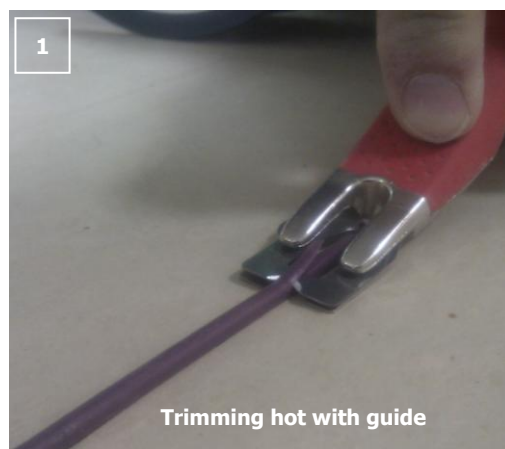
### Welding seams with xf<sup>2</sup> welding rods

- The welding rod must be installed at least 24 hours after bonding the lino sport
- An automatic milling machine must be used (very sharp parabolic blade to ensure the best possible contact between the rod and the flooring (round blade, maximum depth of 2.5 mm, width 3.3 mm, rod diameter 4 mm). Remove all impurities from the groove. We recommend carrying out tests on samples before the final fitting.
- An xf<sup>2</sup> rod is used for the weld, with an automatic carriage or a manual torch suitable for linoleum. The welding temperature will be about 450°C in the heater. The rod must be installed at less than about 2 linear meters per minute, depending on temperature and pressure set on the hot air blower.
- Trimming the rod twice: the first "hot" with the guide (just after welding), the second "cold" but with no guide (wait about 10 minutes between the two operations so that the rod adheres well to the base). A quarter moon knife or a particularly sharp Mozart knife should be used for these operations.

## Quarter moon knife



## Mozart knife



## Drawing game lines - Surface coating

- A two-component polyurethane paint is used to draw game lines on Linosport flooring. A protective tape is used during the painting to fix the shape.
- Two coats should be applied for quality marking; avoiding applying a damp coat on top of a damp coat (the first coat should be dry to the touch). Similarly, the covering power of a game line is obtained by applying two coats. Too much paint can cause microcrazing on the surface.

### For Linosport Classic (4 mm):

- The Linofinish surface coating will be applied over the game lines within 48 hours of their application. The purpose of this polyurethane coating is to give the final surface the appropriate slipperiness and to make routine servicing easier. *The finish coating for Linosport xf<sup>2</sup> is applied at the factory. There is no need for further treatment.*
- For Linofinish application, please refer to the specific instruction.