

SPECIFICATION SHEET NO:	PSA 32	DESCRIPTION:	EXPONA DESIGN PUR	DATE:	MAY 2023
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## ARCHITECTURAL SPECIFICATIONS / BOQ

### SPECIFICATION:

Supply and install Expona Design PUR, flexible PVC tile and plank flooring in 3.0mm thickness, having the following laminated construction: circa 0.7mm clear PVC wear layer, circa 0.07mm print film layer, and circa 2.23mm backing ply, the flooring shall feature a high quality, cross-linked polyurethane reinforcement to provide superior cleaning benefits, life cycle maintenance savings and optimum appearance retention, in accordance with EN ISO 10582, the in-use classification must be at least 23/34/43, as defined in EN ISO 10874: i.e. domestic areas with heavy use; commercial areas with intensive use; light industrial areas, in respect of flame spread, the flooring shall have been fully tested to EN 13501-1 and certified as having Class Bfl-S1, achieving the criteria EN ISO 9239-1  $\geq 8\text{kw/m}^2$  and the mandatory requirement of EN ISO 11925-2 pass. The flooring shall have been fully tested to ASTM E648 by an independent test house and classified as Class 1 rating, making it suitable for use in institutional, commercial and public buildings, with regard to EN 13893 for slip resistance, the flooring shall be classified DS, making it suitable for use in areas which are predominantly dry, when tested to DIN 51130, the flooring achieves an R10 slip rating, for flooring with sustainable wet slip resistance, refer to Expona Control PUR or the Polysafe ranges, this product does not accumulate static charges above 2kV and is classified as 'antistatic' when tested to EN 1815. For specialist applications where there is a requirement to dissipate the electrostatic charge, see the Polyflor ESD product ranges, the product's weight should not be more than 5,100g/m<sup>2</sup>, in respect of light fastness, the flooring shall have been fully tested to ISO 105-B02 Method 3 as having a pass to  $\geq 6$ .

Colour:

Code:

**INSTALLATION: (PLEASE NOTE: ALWAYS USE COMPATIBLE PRODUCTS FROM ONE SUPPLIER)**

### RECEIPT & STORAGE

On receipt of tiles and/or planks: Check that colours correspond to those ordered, that quantities are correct and there is no damage. Check that tiles/planks are from one batch, if that was requested on the order. On arrival at site, the tiles should be stored indoors, together with the adhesive, at a consistent temperature of between 18°C and 27°C for at least 24 hours prior to laying. Following off-loading, boxes should be stacked no more than five high during the conditioning period. The boxes should be opened and conditioned in the area where they are to be installed. For Design Floors, identify and check each element before work proceeds. To achieve best results, site conditions should be prepared as described in BS 8203 or prevailing local or national standards. A working temperature of between 18°C and 27°C is required for at least 48 hours prior to, and during, the installation period; and for 24 hours afterwards. Conditioning should be carried out in the same room or area as the installation, to prevent thermally induced dimensional changes.

### PRIOR TO INSTALLATION (UNDERFLOOR HEATING)

On installations where underfloor heating is used: The system should be fully tested and commissioned prior to the flooring installation commencing. Underfloor Heating systems should be switched off and be fully cooled for a minimum of 48 hours prior to the installation commencing. The system should remain off and fully cooled during the installation and for a minimum of 48 hours afterwards. It should then be slowly brought back up to the working temperature incrementally over several days. A maximum subfloor temperature: (at the adhesive line) of 27°C should never be exceeded. Only specialist high temperature or epoxy adhesives should be used in areas with underfloor heating, direct sunlight, and areas of high solar gain. Please refer to the Polyflor Approved Adhesive List or contact your adhesive manufacturer for more information.

### PREPARATION FOR INSTALLATION

The decoration of tiles is randomly distributed and can be heavier on some tiles than others. To prevent 'heavy' and 'light' areas, the tiles should be unboxed and, if required, 'shuffled'. Alternating the direction of tiles may be required to avoid repeat patterns.

### PRODUCT CONDITIONING

Most installation failures are not caused by poor fitting but instead simply by failure to condition the vinyl tiles and planks correctly prior to

SPECIALIST FLOORING & WALL PROTECTION PARTNER

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installation. The tiles and planks plus any other products such as borders, feature strips, design strips, tozzettos and adhesives and new plywood bases; should be conditioned together for at least 24 hours prior to installation. Boxes of tiles/planks must be stacked less than 5 boxes high and planks/tiles removed 30 minutes before use. The room temperature should ideally be between 18°C and 27°C but more importantly should be constant and not varying by more than 2°C. Conditioning should ALWAYS take place in the area that is to receive the installation. The conditioning time should be increased to at least 48 hours where the planks/tiles have been stored and /or delivered at temperatures below 10°C. As extremes of temperature can occur between day and night-time, temperatures will fluctuate. It is essential that the effects of these fluctuations be avoided. North facing and full height windows; (Inc. patio & bi-fold doors) and all conservatory windows should be shaded or covered both during the conditioning period; the installation period; and for 24 hours after the installation has been completed to minimise this effect.

**NOTE Complaints arising from the failure to correctly condition the tiles and planks, which result in shrinkage or lipping, will not be accepted by Polyflor SA.**

#### **PREPARATION OF THE WORK AREA**

The work area should now be prepared to receive the tiles. Ensure that all other trades have completed their work and removed all their equipment and materials. Remove all debris and vacuum the whole subfloor area. Check the condition of the subfloor and make good as necessary. Stone or power grind any cementitious subfloor to remove any 'nibs' or ridges. Remove any surface contaminants that may affect adhesion. Sweep or vacuum again prior to laying. If required by the contract, or if in doubt, check the moisture content of the subfloor and record the results and method used. Good lighting is essential.

#### **SETTING OUT AND INSTALLATION FOR TILES/PLANKS STRAIGHT FITTING**

The optimum appearance can be produced by carefully planning and setting out of tiles and/or planks. It is advantageous to dry lay a section of the floor so that it can be determined whether the appearance of the pattern is acceptable and also to ensure any graining/texture within individual tiles is correct. Traditionally the starting point for tiling is the centre of the room. Before adhering confirm that the overall appearance of the flooring is acceptable. If the room is irregular in shape it may be necessary to square up the tiles off the most important wall or a specific feature.

To set out Planks for straight fitting: Prior to laying the first plank, ensure all cuts are of an acceptable length (Min. 150mm). As the planks are not required to be laid 'in bond' in the length, it is possible to begin installing from an end wall. Planks must be staggered to obtain a random finish, however, ensure that plank ends are not within 150mm of adjacent planks.

Setting out and installation for straight tiling: Measure the room to be laid, in both directions, including any alcoves etc. Mark a centre line X. Ensure it is central to the room dimensions. Loose lay tiles to ensure there are no small cuts at the perimeter. If small strips are evident, move the centre line across half a tile in either direction to create an acceptable sized cut. Find the centre of line X and mark the Centre Point (CP). Mark arcs 1 & 2 at equal distances from CP on the centre line using point A on your trammel. With points 1 & 2 as centres, use point B on your trammel to draw further arcs intersecting at 3 & 4. Strike a line through point 3 & 4 ensuring it passes through CP. Line Z is now 90° to line X. Double check using the 3,4,5 method.

Setting out and installation for diagonal tiling: Set out as overleaf for straight tiling. Ensure both lines are at 90° to each other. At CP (Centre Point), use point B on your trammel to mark arcs at 1, 2, 3 and 4. With points 1 & 3 as centres using point B on your trammel draw arcs to intersect each other at A. With points 2 & 4 as centres using point B on your trammel draw arcs to intersect each other at C. Strike a chalk line from wall to wall through points A & C; if no error has been made, this line will pass through CP. With points 1 & 4 as centres using point B on your trammel draw arcs to intersect each other at D. With points 2 & 3 as centres using point B on your trammel draw arcs to intersect each other at B. Strike a chalk line from wall to wall through points B & D; if accurate, this line should pass through CP. Double check using the 3,4,5 method.

#### **SPREADING THE ADHESIVE**

Once the start point has been established, depending on the size of the area and the type of adhesive to be used, it may be necessary to section off the area so that the adhesive can be applied to areas that can be laid within the open time. Always follow closely the approved adhesive manufacturer's instructions. Spread the adhesive using a suitable trowel to the manufacturer's recommendations ensuring that the correct notch size is maintained throughout the installation. If the notch on the trowel shows signs of wear it should be renewed immediately. If using a Polyflor approved pressure sensitive adhesive it may be necessary to flatten out any resultant serrated adhesive ridges using a lambswool roller pre-wetted with adhesive to prevent 'grin through' once the installation has been completed. Always read carefully the adhesive manufacturer's application instructions as these can change from brand to brand. NB: This can be especially important when planks/tiles are being bonded to an absorbent substrate such as sand and cement screeds; plywood etc. in order to ensure an adequate bond strength. When a section has been laid, except for the perimeter, it should be thoroughly rolled in both directions with a 68kg articulated floor roller. Repeat for each section until the main field of tiles has been laid. It is advantageous to leave the last full tile or plank and the cut at the perimeter without adhesive until all planks have been cut to size.

#### **SETTING OUT AND INSTALLATION OF BORDERS**

The inclusion of borders or design strips is a simple way of enhancing the appearance of an installation. Borders and design strips come in various widths and styles, but the installation technique is similar in all cases. Borders fit around the field tiles but do not attempt to abut pre-made borders to a wall. Most designs will have a contrasting yet complimentary border. It is preferred, where possible, that full tiles are fitted up

to the borders, in the case of diagonal, exactly half tiles should be used. This gives a more geometric appearance to the installation. It does, however, mean that, in almost all cases the border will have to be adjusted on adjacent walls. In the case of diagonal tiles and for the sake of appearance, the colour of the cut half field tile should contrast with the border. Mark a centre line as described earlier. Determine width of borders. Dry tile to ensure cuts are acceptable and of the correct colour and adjust where necessary. Using centre lines as guides measure to the position of the border and mark with chalk lines. Spread adhesive up to the border lines and fit field tiles. (Remember only spread adhesive to areas that can be laid within the open time). Dry fit perimeter cuts before adhering, as described earlier.

**NOTE This is the normal method of setting out for borders, however it is also possible to set out off a prominent wall or unit, for example. If there is any doubt the border should be discussed with the end user prior to installation.**

#### **INSTALLING IN LARGE AREAS**

Maintaining a clearly defined straight line over long distances can be difficult and often leads to inaccuracies. To eliminate this problem, an alternative technique is used when laying in large areas. Establish the central starting point as described previously, minimising small cuts on perimeter tiles. Lay the first pyramid of tiles from the centre lines, using the sequence shown. Ensure a close bond is always maintained. Repeat this sequence on the opposite side of the centre line. Continue working in larger and larger pyramids until only the perimeter tiles require fitting. Fit perimeter tiles.

#### **INSTALLATION OF PERIMETER TILE S/PLANKS (STRAIGHT LAID)**

Cutting the perimeter tiles/planks (Straight Laid): To avoid run out of the bond, cutting of perimeter row should start at the centre of the wall and work out towards corners. The choice of technique used for cutting perimeter tiles/planks is largely dependent upon the straightness of the wall.

Overlapping Method (Straight Laid): Used when there is little or no run out of the abutting wall. Place the tile to be cut exactly over the last tile laid, ensuring the colour is correct and the decoration runs the correct way. Place another full tile on top of the tile to be cut with its 'top edge' against the wall or skirting/base board. Scribe a line onto the tile to be cut, using the 'bottom edge' of the top tile as a guide. Cut the tile to the scribed line, loose lay into position, and check the fit. Repeat along the whole wall.

Scriber Method (Straight Laid): Used when the wall run out is quite severe or when the wall profile cannot be picked up using a straight edge. Place the tile to be cut exactly over the last tile laid, ensuring the colour is correct and the decoration runs the correct way. Set the bar scriber to the size of tile being laid. Trace the profile of the wall onto the tile to be cut, ensuring the bar scriber is kept flat to the floor and square to the edge of the tile. Cut the tile to the scribed line, loose lay into position and check the fit. Repeat along the whole wall.

#### **CUTTING THE PERIMETER TILES (DIAGONAL CUT)**

Overlapping Method (Diagonal Cut): Used when there is little or no run out of the abutting wall. Place the tile to be cut exactly over the last tile laid, ensuring the colour is correct and the decoration runs the correct way. Place another full tile on top of the tile to be cut (diagonally) with the 'top edge' against the wall or set-in coving. The corresponding point of the tile should then be followed to mark the underlying tile. The overlapping tile should then be moved over to mark the second part of the underlying tile. Following both marks, a straight edge can be used to line both marks and a cut can be made. Cut the tile to the scribed line, loose lay into position, and check the fit. Repeat along the whole wall.

Template overlapping method (Diagonal Cut): Cut a template exactly to the size between the diagonal points (e.g., 428mm for 305mm tiles). Place the tile to be cut exactly over the last tile laid, ensuring the colour is correct and the decoration runs the correct way. Place the template tile on top of the tile to be cut with its 'top edge' against the wall. Scribe a line onto the tile to be cut, using the 'bottom edge' of the tile as a guide. Cut the tile to the scribed line, loose lay into position, and check the fit. Repeat along the whole wall. Marking using an overlapping template on diagonal laid tiles. Cutting the perimeter tiles (diagonal cut)

Scriber Method (Diagonal Cut): Used when the wall run out is quite severe or when the wall profile cannot be picked up using a straight edge. Place the tile to be cut exactly over the last tile laid, ensuring the colour is correct and the decoration runs the correct way. Set the bar scriber to the size of tile between the diagonal points of tile being laid. Trace the profile of the wall onto the tile to be cut, ensuring the bar scriber is kept flat to the floor and square to the edge of the tile. Cut the tile to the scribed line, loose lay into position and check the fit. Repeat along the whole wall.

#### **ADHERING THE PERIMETER TILES**

Once a wall edge has been fitted and loose laid, turn all the tiles inward so as not to lose their position. Spread the adhesive right up to the edges. When the adhesive is ready, lay the perimeter tiles. Wipe up excess adhesive as work progresses. Roll well with a 68kg articulated roller. Use a small hand roller in areas that are inaccessible. Repeat the process for all four walls. Finally, the whole floor should be given a second rolling, approximately one to four hours later.

#### **ADHESIVES**

In areas subjected to direct sunlight or extremes/fluctuations in temperatures Polyflor always recommend the use of an approved polyurethane, epoxy or suitable high temperature adhesive. Polyflor provide this information only as guidance and the legal responsibility for the supply and performance is that of the adhesive manufacturer. Use of the correct adhesives is important if the installation is to be successful. Polyflor provide a comprehensive approved adhesive list available marketing@polyflor.co.za

#### **INLAY STRIP CALCULATION**

Developed to add fine detailing to an overall floor covering, inlay strips include Grouting Strips, Marquetry Strips, Cross Grain Marquetry Strips and Feature Strips. Due to the extensive range of Tile and Planks sizes currently available in the Polyflor ranges we recommend that you call Polyflor for advice regarding Inlay Strip Calculation on (011) 609 3500.

**MAINTENANCE: NOTE: NEVER USE A BLACK PAD TO SCRUB A PUR COATED FLOOR**

To maximize efficiency of the cleaning system and minimize costs taking advantage of the Polyflor PUR-polyurethane reinforcement cross linked and UV cured finish, the following is recommended:

1. Post Installation:

- All loose dirt such as dust, grit, sand etc. must be removed, preferably by vacuuming the floor.
- The floor should then be cleaned using a neutral detergent, diluted as per the manufacturer's instructions, machine scrubbed and dirty cleaning solution wet vacuumed off the floor. (If a wet vacuum is not available, a mop and wringer system can be used).
- Adhesive can be removed with an appropriate detergent/solution such as Polyflor Powerclean if necessary. As a principle, aggressive solvents should be avoided as these may affect the PUR finish. More powerful detergents such as Pro-inox from Nilfisk can be used to remove persistent soiling which is not removed by the initial clean.
- The floor should then be rinsed until all traces of the neutral detergent are removed and wet vacuumed to remove all traces of water.
- We recommend 2 sacrificial coats of Proflor HM matt sealer be applied at this stage as a once off to seal all welded joints and flooring.

**(NB: DO NOT STRIP-ONLY WASH AND SEAL. THEREAFTER, NO MORE SEALERS) NEVER STRIP A PUR FLOOR**

2. Daily

- Sweep/mop using a disposable cloth system such as the Masslinn system or vacuum to remove dust and grit; (Ensure that the vacuum is fitted with a Hepa filtration system in a healthcare environment)
- Spot or damp mop where required using a neutral detergent such as Proclean.
- Buffing/burnishing with high-speed disc machine.

3. Interim or Weekly Clean (Depending on conditions)

- To remove light scuff marks.

Dry buff with a +- 1000 rpm **ultra-high speed** burnisher using a clean 3M pink eraser or white pad.

- To remove heavy scuff marks:  
Scrub with a **low speed** burnisher and neutral detergent, Proclean-diluted 100ml: 10L with cold water using the green Eco Brilliance pad.
- To create a slightly higher sheen, you can use a red pad with a spray buff product (Probuff) and a high-speed machine.

4. Periodically (3-9 monthly) depending on conditions.

- If required, scrub with a +- 165 rpm machine fitted with a red or blue pad using neutral detergent PROCLEAN diluted 20:1 with cold water as appropriate. Rinse well with clean water and dry buff with white pad to restore finish.

Please note that all PVC welding rod is not coated. We recommend the application of a layer of PUR sealer to all welds in a PUR sheeting floor to enhance maintenance procedures.

**NB: to create a higher sheen on the floor, use a 1000 rpm machine using a clean white 3M pad or green Eco Brilliance Pad.**

These products are all available from Nilfisk (011) 801 4600.

This program will keep maintenance costs to a minimum and **requires no polish.**

**Sufficient entrance or barrier matting is highly recommended and will greatly ease the maintenance programme.**



# EXPONA DESIGN

Expona Design is a collection of Luxury Vinyl Tiles, replicating the beauty of natural timber, slate and marble, with additional creative and innovative effects for use in heavy commercial areas.



	Gauge	EN 428/EN ISO 24346	3.0mm
	Wear Layer	EN 429/EN ISO 24340	0.7mm
	Plank Size	EN 427/EN ISO 24342	24 # 302.4 x 914.4mm = 3.34m <sup>2</sup> 14 # 203.2 x 1219.2mm = 3.46m <sup>2</sup> 12 # 184.2 x 1524mm = 3.37m <sup>2</sup> 8 # 203.2 x 1524mm = 3.41m <sup>2</sup>
	Tile Size	EN 427/EN ISO 24342	9 # 609.6 x 609.6mm = 3.34m <sup>2</sup> 18 # 304.8 x 609.6mm = 3.34m <sup>2</sup> 12 # 304.8 x 914.4mm = 3.34m <sup>2</sup> 8 # 457.2 x 914.4mm = 3.34m <sup>2</sup> 8 # 914.4 x 914.4mm = 8.01m <sup>2</sup> 8 # 609.6 x 1219.2mm = 4.46m <sup>2</sup>
	Total Weight	EN 430/EN ISO 23997	3100g/m <sup>2</sup>
	General Performance	EN 649 EN ISO 10582	Conforms Conforms
	Use Area	EN 685/EN ISO 10674	
	Reaction to Fire	EN 13501	Class Bfl-S1
	Abrasion Resistance	EN 660-2 EN ISO 10582	Group T Type 1
	Slip Resistance	EN 13893 DIN 51330 AS/NZS 4586	Class DS (dry condition) R10 R10
		For safety flooring with sustainable wet slip resistance, refer to Expona Control or the Polysafe ranges.	
	Indentation Residual	EN 433/EN ISO 24341	≤0.05mm
	Dimensional Stability	EN 434/EN ISO 23999	≤0.76 max
	Thermal Conductivity	ISO 1264-2	Suitable for underfloor heating. Max 27°C.
	Light Fastness	ISO 105 B02	(Method 3) ≤6
	Castor Chair (continuous use)	EN 425/ISO 4918	Suitable
	Electrical Behaviour (body voltage)	EN 1818	«2kV Classified as 'antistatic'»
	VOC Emissions	Indoor Air Comfort GOLD AgBB VOC test FloorScore Finish M1 Afluel	Eurofins certified product Very low emissions Certified product Pass A+
	Responsible Sourcing	BES 6001 SA 8000	Very Good Approved factory
<p><b>Environmentally Preferable Flooring</b> - Expona Design PUR achieves a BRC Global Environmental A+ Rating (Certificate No: ENP 429). EN 15804 Environmental Product Declaration (EPD) is available on request. Expona Design PUR is 100% recyclable and contains average 40% recycled material. Recyclable via the Recofloor scheme. Visit <a href="http://www.polyflor.com/sustainability">www.polyflor.com/sustainability</a>.</p> <p><b>PUR</b> - Expona Design PUR features a high quality, cross-linked polyurethane reinforcement, UV cured to provide a low cost, polish-free maintenance regime for the lifetime of the flooring.</p> <p>For information regarding handling and installation, adhesives, maintenance, applications, chemical resistance and product warranty, consult Polyflor Customer Technical Services on +44 (0)161 767 1912, or email <a href="mailto:tech@polyflor.com">tech@polyflor.com</a>. The data presented is correct at the time of printing. For latest information, please visit our website <a href="http://polyflor.com">polyflor.com</a>. Decorations and shade may vary slightly from the samples shown.</p>			

100% RECYCLABLE  
40% RECYCLED MATERIAL

A+ BRE  
Green Building

EPD  
Environmental Product Declaration

Recofloor  
The Recycled Scheme

PUR  
Polyurethane Reinforcement

BES 6001  
Responsible Sourcing

SA 8000

ISO 9001

ISO 14001

ISO 45001

ISO 19011

ISO 27001

CE  
EN 14041

**POLYFLOR**  
SPECIALIST FLOORING

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FLOORING

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