PYTHON LR
LEVELLING COMPOUND

Document No:	LR.TDS.v2.0
Document Type:	Technical Datasheet
Publish Date:	10/10/2022
Product Name:	Python LR

GET A GRIP!
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Python LR is a single part, high strength, rapid drying and curing concrete floor leveller. The product's formulation incorporates a blend of specially graded fillers, cements, polymers and fibres.

It is mixed with clean cold water to give a free flowing product that can be applied from 3-75mm in one application.
Our specifically formulated fibre technology aids application and strength resulting in a strong, sound and even base ready to commence the tiling process after only 8 hours.

Its fast set time (in good ambient conditions) enables light foot traffic in 3 hours.

BASIC ATTRIBUTES

CT C35 F6 EN 13813 Class
Apply from 3-75mm
3 Hour Set Time
Apply tiles after 8 Hours
Apply impervious floor coverings after 24 Hours
Ideal for use on Plywood & Tile Backer Board
Suitable for use with Underfloor Heating
Protein Free
Single Part - No additives required
Simply mix with water to use

SURFACE PREPARATION

All subfloors should be protected from moisture from the subground by use of a base damp proof membrane (DPM) (please check older properties, which may not have a base DPM and consult Python Adhesives for advice). Assess moisture levels in accordance with BS 8203, to achieve a hygrometer reading of 75%RH or less. Where this is not attained a surface DPM should be used – the selection of which will be subject to the subfloor (please seek advice from Python Adhesives).

Any surface laitance, adhesive residue, paints, weak smoothing underlayments and any other materials which will hinder Python LR's bond with the subfloor should be mechanically removed.

The subfloor should be clean, dry and sound. The area should also be dust free prior to any primer application.

PRIMING

All ratios are water:primer.

Subfloors should always be primed. Primer should be allowed to dry prior to the application of Python LR. Drying times will be based on ambient conditions - bear in mind that cold or damp/humid conditions, or poor airflow, can extend drying time (please see Python PR datasheet for further information).

Porous Substrates: The absorbency of floors/screeds can vary significantly, this is to be assessed by personnel on site. Apply a coat of primer diluted 3 parts water to 1 part primer. Allow to completely dry (usually 1-2 hours). Apply a second coat diluted 1 part water to 1 part primer and allow to completely dry before applying further materials. **Note: on very absorbent substrates a third coat may be required diluted 1 part water to 1 part primer.**

Non-porous Substrates: Including very dense substrates/subfloors. Python PR should be applied neat, in a thin uniform coating and allowed to dry fully.

SUBFLOOR PREPARATION

Concrete Subfloors: Power floated concrete should be treated as non-porous. Mechanically abrade (shotblast or scarify) to remove surface hardeners and expose the cement/aggregate.
Apply Python PR neat in a thin uniform coating, allowing it to dry fully (usually 1-2 hours).

Tamped or Pan Floated Concrete: Should be treated as porous, and any laitance or weak material should be mechanically removed to ensure a sound, dry and dust-free surface.
Apply Python PR diluted 3:1 with clean water and allow to dry fully (usually 1-2 hours).

Sand/Cement Screeds: These should be strong enough for an application of Python LR.
Weak, friable or damaged screed should be uplifted and repaired. Apply Python PR diluted 3:1 with clean water and allow to dry fully (usually 1-2 hours). Two-coat application may be required for very absorbent screeds.

Existing Smoothing Underlayments: Python LR can be used over most intact cementitious cement underlayments. Remove adhesive residues and treat as an absorbent floor.
Apply Python PR diluted 3:1 with clean water and allow to dry fully (1-2 hours).
Apply a second coat diluted 1:1 with clean water allowing it to dry to a clear film (1-2 hours).
Note: application is only suitable on subfloors that are in equivalent strength to Python LR.

Terrazzo/Granolithic Ceramic Tiles: These must be securely bonded, and any surface treatment should be mechanically removed. A good mechanical key should be ensured by abrading the surface using a Surface Texturing & Grinding (STG) machine (a diamond disc is recommended).
These subfloors can be treated as low porosity and primed using Python PR neat.

Calcium Sulphate/Anhydrite/Hemihydrate Screeds: See relevant manufacturer's technical datasheet.
A barrier primer application is required. If moisture is above 75%RH we do not recommend using a surface DPM. These screeds often incorporate warm water underfloor heating systems which can be used, along with dehumidifiers, to speed up the drying process. Screed manufacturers normally suggest this can be conducted after 7 days minimum curing. Mechanically remove any laitance or weak material to leave a clean, dry and dust-free surface. We recommend an STG machine with suitable mesh grinding disc of 60-100 grade grit.
Apply Python PR diluted 3:1 with clean water and allow to fully dry overnight. Apply a second coat diluted 1:1 with clean water allowing it to dry to a clear film (usually 1-2 hours).

Plywood/Tile Backer Board: Plywood must be of flooring grade and mechanically fixed to a sound strong base. Python LR is only recommended for use with plywood of 15mm thickness and greater or Tile backer boards of 6mm thickness. Plywood must be sealed on the underside and along all edges to ensure moisture absorption from beneath is kept minimal. For thinner flooring grade plywood subfloors contact Python's technical department. Plywood and tile backer board absorbency differs depending on the nature of the surface.
Normally a diluted coat of Python PR (3:1 with clean water) is recommended. For dense surfaces of very low absorbency apply Python PR neat in a thin uniform coating. Allow primer coats to fully dry.

Warm Water Underfloor Heating (UFH): Systems must have been fully commissioned and brought up to their maximum temperature, and ideally switched off 48 hours before application. In the absence of other heat sources, the UFH may be set to 'cutback' position to achieve an air temperature of 15°C. Any expansion or movement joints must be carried through to the floor covering surface.

Radiant Electrical Underfloor Heating System: Python LR can also be used over electrical UFH systems where the cables are fixed to a sound strong mechanical fixed cement faced backer board. Apply Python PR diluted 3:1 with clean water and allow to dry fully (usually 1-2 hours). It may also be used where electrical UFH is used over cementitious or calcium sulphate subfloors. Priming should be as per the substrate. In all cases Python LR must be applied at a thickness of 5mm above the cables for resilient, textile and timber applications and a minimum of 3mm for application of stone, ceramic or porcelain products.

DPM: Applications should be carried out within 36 hours of the DPM application. The DPM must then be primed with Python PR neat in a thin uniform coating, allowing it to dry fully (usually 1-2 hours). For any other scenarios please call Python Adhesives for advice.

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MIXING AND APPLICATION

Mixing ratios of powder and water should be controlled to ensure a free flowing material suitable for 3-75mm application. Do not use excess water as this will affect the product performance and finish.

For trowel/hand application mix in a clean bucket using clean cold water, as warm water will greatly reduce the product's working time and may result in shrinkage.
Pour 3.4 litres of water into an oversized bucket (20+ litres), and then gradually add the powder whilst mixing continually with an electric drill with power whisk.
When all powder is added mix for a further 2 minutes, keeping the whisk below the surface (to minimise air entrapment) until a lump free creamy material is attained.

Once mixed, the product can be applied by pouring onto the floor and spreading with a smooth edge steel trowel. Plan to begin at the furthest point working back towards the point of entry to avoid walking through wet product. Maintain a wet edge to ensure adjacent mixes blend in correctly.
For large areas or deep sections it may be beneficial to batten off areas into sections.

CURING & DRYING

All curing and drying times are based on good site conditions, air temperature of 20°C, air humidity of maximum 75% and good ventilation. Cold, humid or damp sites, or those with poor airflow, will prolong curing and drying times, so make adequate allowances for such. Avoid strong drafts and direct sunlight during curing which can 'force dry' the product and result in excess tension and cracking.

Python LR is ready to receive light foot traffic after 3 hours. Once this leveller has been installed it must be ensured that it is fully dry before continuing the tiling process, to include priming and adhesive applications.

Tools should be thoroughly cleaned with water to remove excess material immediately after use and before adhesive sets.

TECHNICAL DATA

CLASSIFICATION	CT-C35-F6
DEPTH:	3mm - 75mm
WALK ON TIME AT 20°C:	*3 Hours (3mm application)
COMMENCE TILING	*8 Hours (3mm application) *24 Hours (5-15mm application) *48 Hours (15-30mm application) *72 Hours (30-50mm application) For depths above 50mm leave 7 days before commencing the tiling process. (*Depending on substrate porosity, nature of flooring and notes in Curing & Drying above.)
COMPRESSIVE STRENGTH (N/mm²):	28 Days: 35.0 (to BS EN 13892-2)
FLEXURAL STRENGTH (N/mm²):	28 Days: 6 (to BS EN 13892-2)

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STORAGE

This product must be stored in unopened bags, clear of the ground in dry conditions. Avoid frost.
Ideal storage temperatures are between 5˚C and 25˚C. Keep free from floor traffic and other trades whilst curing.

SHELF LIFE

Under the above storage conditions this product has a shelf life of 8 months.
High temperatures and high humidity will lead to a reduced shelf life.

SITE CONDITIONS

The drying characteristics of cementitious levellers are directly influenced by ambient air and floor temperatures. Cement within the leveller cures through a process of hydration using moisture. Extreme site conditions can affect this process i.e. below 5°C and above 30°C.

Ideal ambient air and floor temperatures for application are between 10°C and 22°C. These temperatures should be maintained throughout application and curing periods. Outside of these temperatures consideration should be given to the following guidelines for good practice. Floor temperatures will be slower to respond to ambient air temperature so should be considered in advance.

High humidity and low temperature prolongs evaporation of moisture from the freshly applied leveller and therefore extends drying times. This may ultimately delay installation of floor coverings. In such conditions planned heating (not gas heating) may be required before, during and after application of the product in order to promote ideal site conditions. Heat should be directed into the air not direct to the floor creating hot spots. Good ventilation without direct drafts will also assist removal of moisture in the air from the building. Failure to adopt such practices in such adverse site conditions may result in damp patches, slow drying and potential surface bleed within the curing leveller.

Low humidity and high temperature conditions will speed up drying by fast removal of moisture from freshly applied leveller. Such conditions may cause rapid loss of moisture, required for the curing process, leading to irregular structure and strength build up. Such tensions within the drying leveller could leave hairline surface defects. Under such conditions, levellers should be protected from direct sunlight and drafts across its surface. Good air flow within the build without causing drafts is essential to reduce high temperature build up.

HEALTH & SAFETY

Please ensure that appropriate PPE is used when preparing, mixing and applying products.
Always wash hands before consuming food and make sure that materials are kept safely out of reach of children and animals. Please dispose of packaging and waste appropriately.

A full Material Safety Data Sheet relating to this product is available from **pythonadhesives.co.uk**

QUALITY ASSURANCE

All products are manufactured in a plant whose quality management system is certified as being in conformity with BE EN ISO 9001. Python products are guaranteed against defective materials and manufacture and will be replaced or money refunded if the goods do not comply with our promotional literature.

COVERAGE

APPLIED THICKNESS	COVERAGE PER UNIT (approx.)	CONSUMPTION Per 10m² AREA
3mm	4.0m²	2.5 bags
5mm	2.4m²	4.2 bags
10mm	1.2m²	8.4 bags
15mm	0.8m²	12 bags

POINTS OF NOTE

All Python levellers are manufactured to meet the performance requirements of BS EN 13813 and the relevant classifications. References to BS EN13813:2002 confirms the minimum compressive and flexural strengths that the product will attain when tested to the standard.

All figures stated are based on tests carried out under quality controlled environments using Python LR with the correct water ratios. Actual results attained will be subject to site conditions and allowances should be made accordingly.

Please note that this product uses natural aggregates and other materials that may marginally vary in colour. This does not affect the consistency or characteristics of the product.