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Technical Datasheet
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Python LR

GET A GRIP!
PYTHON
ADHESIVES

PYTHON LR A FAST SETTING, FLEXIBLE, FIBRE REINFORCED SELF LEVELLING COMPOUND

- Apply to tiles after 3 hours
- Apply impervious floor coverings after 24 hours
- Ideal for plywood
- Can be used with underfloor heating systems
- Protein free
- Single part, no additives required
- Simply mix with water to use

CT 30 F7
EN 13813 Class

APPLY FROM
2-50mm

TILE AFTER 3 HOURS
LVT AFTER 24 HOURS

DESCRIPTION

Python LR is a fast setting, flexible, fibre reinforced self levelling compound. The specially formulated powder enables the product to be poured to depths between 2mm – 50mm in one application and receive foot traffic after 3 hours.

Python LR has excellent flow and adhesion properties making it suitable for a wide range of both commercial and domestic applications. Python LR is suitable for use over a wide range of substrates including sand/cement screeds, concrete, flooring grade asphalt/bitumen, ceramic, porcelain and terrazzo tiles, epoxy damp proof membranes and plywood.

Python LR is also ideal for encapsulating electric underfloor heating elements and for use over underfloor heated screeds.

Python LR is fast setting, meaning ceramic tiles can be installed after as little as 3 hours, and decorative floor coverings can be installed after 24 hours.

Under certain conditions, Python LR is suitable for use externally. For further information please contact the Technical Helpline on 020 8778 9000 or email getagrip@pythonadhesives.com for further information.

PREPARATION

Before starting, all substrates must be clean, dry and strong enough to support the weight of the leveller and the final floor covering being applied. Remove all dust, dirt, oil, grease and other contaminants that may affect adhesion. Where traces of adhesive residue remain, these must be checked to ensure that they are not softened with water and that they are strong, sound and well adhered to the substrate in order to receive a levelling compound.

The substrate must be confirmed dry by consistent moisture readings; <75% relative humidity (RH) or <0.5% residual moisture content prior to starting. Where a structural damp proof membrane is not present or where rising damp and/or residual moisture results in moisture readings up to 98% RH, a liquid damp proof membrane must be applied before the application of Python LR. Surface laitance should be removed from concrete and sand/cement screed surfaces prior to application.

Substrates require priming prior to the application of Python LR. Priming the substrate will minimize the risk of pinholes forming, allow for the best flow properties and also prolong the working time of the product. Priming the substrate prior to application is considered “best practice”. For recommended priming dilution rates please refer to Page 3 of this data sheet.

Prior to levelling timber substrates ensure that timber boards are securely screwed down and firmly fixed. Where timber substrates are sufficiently rigid but uneven or worn, Python LR can be used to smooth and level the timber substrate prior to over-boarding with plywood overlay or a tile backer board. If following this process, allow Python LR to cure before fitting the overlay boarding.

MIXING AND APPLICATION

Always mix by adding powder to water. Python LR is mixed with a water content of 4.5 – 5.0 litres of water per 20kg of Python LR. In a clean mixing vessel, add the pre-measured water before adding the powder component slowly whilst mixing with an electric paddle until a smooth and lump free consistency is obtained. Once mixed, allow the product to stand for 2 minutes and stir again prior to application. Do not add further water once mixed. Exceeding 5.0 litres of water per 20kg will result in water bleed and therefore extended drying times and a weakened mix.

N.B. Once mixed, Python LR will remain workable in the bucket for 20 - 30 minutes at 20°C.

Pour a small quantity onto the prepared surface and trowel down lightly to a depth between 2mm and 50mm. The use of a spiked roller is recommended immediately in thin applications in order to remove entrapped air and smooth out flow lines. Setting time will depend on atmospheric conditions/temperatures, it will be slowed by lower temperatures and accelerated by higher temperatures. If a depth greater than 50mm is required, allow the first application to dry and prime the surface with Python PR at a 3:1 ratio before applying a subsequent coat. Clean tools immediately after use with clean water. Python LR is ideal for pump application. Mix in accordance with the pump manufacturer's instructions and ensure that regular flow checks are carried out. Ensure the water content is correct and that there is no surface separation

SETTING AND COVERING

In ideal conditions, Python LR will accept light foot traffic after 3 hours. Python LR must be left to dry before applying the final decorative surface flooring. This is typically after 3 hours for ceramic tiles and 24 hours for decorative flooring such as vinyl, however, this can vary depending on the choice of surface flooring. Thicker applications may require a longer time to dry prior to applying floor coverings. If there is no air flow within site conditions, the drying time may be restricted. The critical moisture content for the flooring in question must be observed.

Substrates

- **Sand/Cement Screed**
- **Concrete**
- **Plywood Overlay (6mm min)**
- **Electric Underfloor Heating**
- **Water/Wet System Underfloor Heating**
- **Tile Backer Boards**
- **Existing Ceramic, Porcelain and Natural Stone Tiles***
- **Flooring Grade Asphalt & Bitumen***
- **Anhydrite Screeds**
- **T & G Floorboards**
- **Floating Floors**
- **Existing Vinyl Tiles***
- **Steel/Metal Surfaces***
- **Epoxy DPM***
- **Existing Adhesive Residues**
- **Green Screed**
- **Fibreglass***

* Prime with Python PR

Suitable | Not suitable

SUBSTRATE PREPARATION GUIDE

Concrete: New concrete must be allowed a minimum of 6 weeks drying time. As an approximate guide for drying times, allow 1 day per mm up to an overall depth of 50mm and 2 days per mm for anything above 50mm. Ensure new concrete is confirmed dry via consistent moisture readings across the whole surface. Concrete screeds must have a reading of less than 75% relative humidity (RH) before work can commence. Remove any laitance from the surface mechanically and ensure that mould oil, curing agents and any other contaminants are removed. Remove all dust and dirt ideally by vacuum. Prime surface with Python PR diluted at a 3:1 ratio (3 parts water to 1 part Python PR) and allow to dry. Very porous substrates will require more than one coat.

Sand/Cement Screed: New sand/cement screed must be left for a minimum of 4 weeks to dry sufficiently. Ensure new sand/cement screed is confirmed dry via consistent moisture readings across the whole surface. Sand/cement screeds must have a reading of less than 75% relative humidity (RH) before work can commence. Remove any laitance from the surface mechanically and ensure that mould oil, curing agents and any other contaminants are removed. Remove all dust and dirt ideally by vacuum. Prime surface with Python PR diluted at a 3:1 ratio (3 parts water to 1 part Python PR) and allow to dry. Very porous substrates will require more than one coat.

Flooring Grade Asphalt/Bitumen: Prior to applying Python LR ensure that the flooring grade asphalt/bitumen is in good condition and that there are no signs of debonding and/or hollowness. Make sure the surface is dry and free of any contaminants, loose dust or dirt. Prime the surface with one coat of Python PR and allow to dry.

Existing Ceramic, Porcelain & Natural Stone Tiles: Prior to applying Python LR ensure the surface is dry and free of any contaminants, loose dust or dirt. Existing tiles that have been previously treated with sealer must be sufficiently cleaned in order to remove any surface treatments by de-greasing. Prime the surface with one coat of Python PR and allow to dry.

Plywood Overlay: Prior to applying Python LR, ensure that new or existing boards are dry, i.e. conditioned to the environment in which they will be used. Plywood sheets must be a thickness of 6mm (minimum), flooring grade, screwed (not nailed) to substrate at 6 inch/150mm centres. Ensure there is sufficient ventilation beneath substrate and that the plywood has been fitted competently and will take the weight of the leveller, adhesive and the final floor covering being applied. Make sure the surface is dry and free of any contaminants, loose dust or dirt.

Existing and/or lightly contaminated plywood requires priming with Python PR diluted 3 parts water to 1 part Python PR. New, uncontaminated plywood does not require priming prior to tiling.

Underfloor Heating Systems: When applying Python LR onto existing underfloor heating you must switch the heating off 48 hours prior to application to allow the substrate to cool sufficiently. Once the self levelling and the flooring installation has been completed allow 1 week for full cure of Python LR before switching the heating on. When doing so, start with a low temperature and gradually increase the temperature on a daily basis by no more than 2°C per day.

When tiling or applying soft flooring on to a new electric element underfloor heating system, Python Adhesives strongly recommend embedding the electric underfloor heating mat/element into a self levelling compound such as Python LR in order to protect the heating element and to leave a perfect surface on which to apply the flooring finish. Allow one week for full cure before switching the heating on, start with a low temperature and gradually increase the temperature on a daily basis by no more than 2°C per day.

NB When installing soft flooring above an electric underfloor heating element, Python LR must be applied to allow for 5mm of Python LR above the element.

Underfloor Heated Screeds should be commissioned prior to tiling or applying a soft flooring finish. Turn on the heating system at a low temperature and heat the screed gradually by no more than 5°C per day until a maximum temperature of 25°C is achieved. Maintain this temperature for 3 days and then switch the heating off 48 hours prior to applying the flooring finish to allow the substrate to cool sufficiently. Alternatively, in cold conditions, reduce the temperature of the screed to below 15°C.

Once the self levelling and the flooring installation has been completed allow 1 week for full cure of Python LR before switching the heating on. When doing so, start with a low temperature and gradually increase the temperature on a daily basis by no more than 2°C per day.

Anhydrite/Gypsum Screed: Anhydrite/Gypsum screeds must be confirmed dry via consistent moisture readings across the whole floor. The residual moisture content of the screed must be less than 0.5%. Alternatively, the relative humidity must be 75% or below. As an approximate guide for drying times, allow 1 day per mm up to an overall depth of 40mm and 2 days per mm for anything above 40mm. The drying of anhydrite/gypsum screeds can be assisted by commissioning the underfloor heating system, for further information, please contact our Technical Helpline. All anhydrite/gypsum screeds must be mechanically sanded/abraded in order to remove the laitance from the surface of the screed.

The surface of the anhydrite screed must be primed with 2 coats of Python PR. The first coat must be diluted 3:1 (3 parts water to 1 part Python PR) and allowed to dry. Once dry, a second, neat coat of Python PR must be applied to the surface and allowed to dry.

Tile Backer Board: Prior to applying Python LR ensure the surface is dry and free of any contaminants, loose dust or dirt. Prime surface with Python PR diluted at a 3:1 ratio (3 parts water to 1 part Python PR) and allow to dry. Very porous substrates will require more than one coat.

Existing Vinyl Tiles/Sheet Vinyl: Prior to applying Python LR, make sure the existing vinyl tiles/sheet vinyl is firm, stable and well adhered to the substrate to which the vinyl was originally applied to. Ensure the surface is dry and free of any contaminants, loose dust and dirt. Existing vinyl that has been previously treated with sealer must be sufficiently cleaned in order to remove any surface treatments. Prime the surface with one coat of Python PR and allow to dry.

Power Floated Concrete: Ensure the surface has been allowed 7 days to cure. Ensure new concrete is confirmed dry via consistent moisture readings across the whole surface. Concrete screeds must have a reading of less than 75% relative humidity (RH) before work can commence. Power floated concrete can leave a loose top layer and/or laitance once it has cured. Remove the loose top layer and any laitance from the surface mechanically or by acid etching and remove all dust and particles ideally by vacuum. Prime surface with Python PR diluted at a 3:1 ratio (3 parts water to 1 part Python PR) and allow to dry. Very porous substrates will require more than one coat.

Epoxy Damp Proof Membrane: Ensure the surface is dry and free of any contaminants, loose dust or dirt. Prime the surface with one coat of Python PR and allow to dry.

HEALTH AND SAFETY

Python LR contains cement. Contact with moisture or gauging water sets off an alkaline reaction which may cause skin irritation and/or caustic burns to mucous membranes (e.g. eyes). Irritant to respiratory system. Risk of serious damage to eyes, therefore avoid contact with eyes and prolonged contact with skin. Do not breathe dust. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap. Wear suitable gloves (e.g. cotton gloves soaked in nitrile) and eye/face protection. If swallowed, seek medical advice immediately and show this container or label. Keep out of reach of children. Low in chromates.

For further information refer to the Material Safety Data Sheet.

The information contained on this spec sheet is given voluntarily and in good faith. It is to the best of our knowledge true and accurate; however it may contain information which is inappropriate under certain conditions of use. The company cannot accept responsibility for any loss or damage due to inappropriate use or the possibility of variations of working conditions and of workmanship outside our control.

Technical Data	
Screed classification	CT-C16-F7 to EN13813:2002
Working time @ 20°C	20 - 30 minutes
Time to foot traffic @ 20°C	3 hours
Application thickness	2mm – 50mm
Compressive strength N/mm² (BS EN 13892-2)	1 day > 15.0 7 day > 20.0 28 day > 30.0
Flexural strength N/mm² (BS EN 13892-2)	1 day > 3.0 7 day > 5.0 28 day > 7.0
Coverage	20kg will cover 4.2m² at 3mm thickness
Flow properties using 30mm x 50mm flow ring	135 – 145 mm
Minimum application temperature	5°C
Shelf life	Stored correctly this product has a shelf life of 6 months
Colour	Grey
Pack size	20kg
Note	All work must be carried out in accordance with British Standard Code of Practice.

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EN 13813:2002 | CT-C30-F7 | Fast drying cement based self – levelling compound for use in interior locations	
Reaction to fire	NPD
Release of corrosive substances	CT
Water permeability	NPD
Water vapour permeability	NPD
Compressive strength	C30
Flexural strength	F7
Wear resistance	NPD
Sound insulation	NPD
Sound absorption	NPD
Thermal resistance	NPD
Chemical resistance	NPD