

# SUBSTRATE PREPARATION





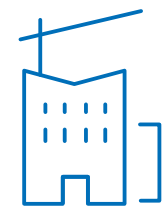
MAPEI PROVIDES COMPLETE SYSTEMS FOR THE PREPARATION OF SUBSTRATES TO RECEIVE ALL TYPES OF FLOOR COVERINGS, EVEN IN THE MOST CHALLENGING ENVIRONMENTS.

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ICONS KEY



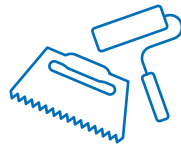
NEW CONSTRUCTION



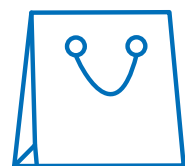
APPLICATION BY ROLLER



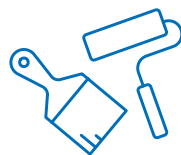
OLD BUILDINGS



APPLICATION BY SPATULA  
AND ROLLER



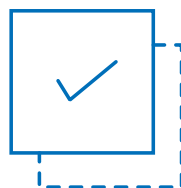
COMMERCIAL ENVIRONMENTS



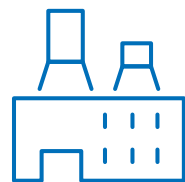
APPLICATION BY ROLLER AND  
BRUSH



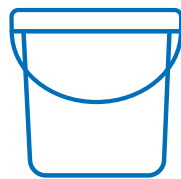
HOSPITALS



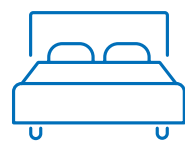
EASY APPLICATION



INDUSTRIAL BUILDINGS



READY TO USE



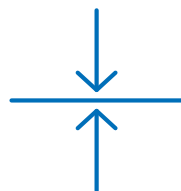
GUEST ROOMS



SHAKE BEFORE USE



SCHOOLS AND EDUCATION



LOW THICKNESS



DOMESTIC ENVIRONMENTS



PERFECT ADHESION TO THE  
SUBSTRATE

ICONS KEY



UNIFORM SURFACE



LOW ODOUR



VAPOUR CONTROL



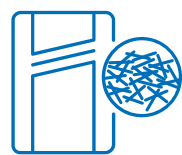
LOW VOC EMISSIONS IN  
INTERNAL ENVIRONMENTS



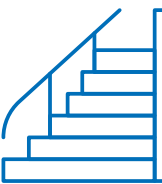
OVER ADHESIVE RESIDUE



ZERO ENVIRONMENTAL IMPACT



FIBRE REINFORCED



STEPS AND STAIRS



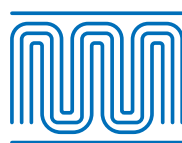
SMOOTHING AND SKIMMING  
COMPOUND



FAST INSTALLATION AND  
RAPID SETTING

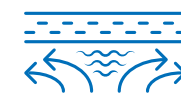


QUICK HARDENING



UNDERFLOOR HEATING





## Protect: Moisture Control

When installing resilient floor coverings; vinyl sheet and tile, rubber, linoleum and all other textile and wood floor coverings, approximately 90% of installation failures fall in to two categories, poor preparation and the failure to deal with excessive moisture in the substrate.

Before commencing with the installation of any resilient floor covering it is essential that substrates have been given time to dry correctly. The drying time for traditional cementitious substrates made from sand and cement is approximately 10 days per centimetre of thickness and during this period, screeds are subject to hygrometric shrinkage and possible cracking. These cracks will compromise any surface moisture protection and may well form a risk of subfloor preparation de-bonding from the substrate.

It is vital to ensure that substrates are dry prior to floor preparation and installation. The dryness of substrates can be measured in a number of ways and, in most cases, to install moisture sensitive materials the relative humidity must be lower than 75% (RH) / 2% (WW) for cementitious substrates and below 0.5% (WW) for gypsum or anhydrite-based screeds.

The incorporation of underfloor heating systems within a substrate may affect acceptable moisture levels and guidance should always be sought from individual manufacturers. Moisture measurements can be obtained using a carbide hygrometer, electric hygrometer or by Protimeter drill and plug tests. Other forms of moisture testing apparatus are available but compliance to current British Standards should be checked.

If levels of residual moisture are higher than the aforementioned values and it is not possible to wait for further excess water to evaporate, a damp proof membrane must be applied before continuing with the installation of moisture sensitive floor preparations, primers, adhesives and floor coverings.



# ■ Mapeproof ESM

**DESCRIPTION** Two-component, solvent free, epoxy resin, surface applied DPM used as a moisture barrier on cement-based substrates with high residual or static moisture. Can be used as a one or two coat system to prevent moisture in the substrate from reaching the floor covering. The product has very low odour, therefore ideal for use in inhabited areas, schools, hospitals etc. Roller applied.

**TECHNICAL DATA**

**Set to light foot traffic:** at +23°C 3-4 hours  
**Final cure:** at +23°C 7 days  
**Coverage(approx 1 coat):** 13m<sup>2</sup> per 4kg unit 3.3m<sup>2</sup> per 1kg unit  
Protection from RH Levels of 75%RH to 92%RH  
**Coverage(approx 2 coat):** 20m<sup>2</sup> per 4kg unit 5m<sup>2</sup> per 1kg unit  
Protection from RH Levels of 92.1%RH to 97%RH

**Shelf life:** 24 months  
**Packaging:** 4kg kit & 1kg kit

**CERTIFICATION**

**MAIN FEATURES**



**WHERE TO USE**



# ■ Mapeproof One Coat

**DESCRIPTION** Two-component, single coat, black, epoxy surface applied DPM applied to cement-based substrates for controlling residual, static and construction moisture levels of above 75% (BS8203) and below 97% R.H. on subfloors with an effective structural damp proof membrane prior to the installation of resilient, textile and wood floor coverings. Suitable for use with underfloor heating except where wood finishes are to be installed. Trowel and roller applied.

**TECHNICAL DATA**

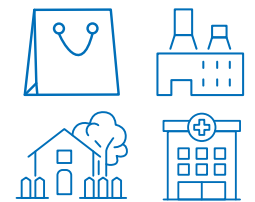
**Set to light foot traffic:** after approx. 5 hours  
**Final hardening:** at +23°C 24 hours  
**Coverage(approx):** 16m<sup>2</sup> per 7kg unit  
Protection from RH Levels of 75%RH to 97%RH  
**Shelf life:** 12 months  
**Packaging:** 7kg kit

**CERTIFICATION**

**MAIN FEATURES**



**WHERE TO USE**



# ■ Mapeproof 1K Turbo

**DESCRIPTION** One-component, solvent free, rapid drying, polyurethane surface applied DPM for use on cementitious screeds, which are not subject to rising damp, but have a residual humidity content higher than the British Standards recommended 75% R.H. (BS8203), prior to the installation of resilient or wood flooring. Can be used as a one or two coat system. Roller applied.

**TECHNICAL DATA**

**Set to light foot traffic:** 60 mins  
**Final hardening:** after 2 hours  
**Coverage(approx):** 50m<sup>2</sup>  
Protection from RH Levels of 75%RH to 92%RH - One coat application.  
Protection from RH Levels of 92.1%RH to 97%RH - Two coat application.

**Waiting time between coats:** 40mins - 2hrs  
**Min waiting time before priming:** 40 mins  
**Shelf life:** 12 months  
**Packaging:** 10kg

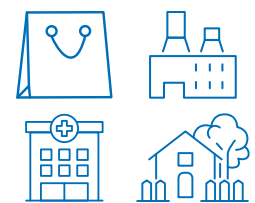
**CERTIFICATION**



**MAIN FEATURES**



**WHERE TO USE**



# ■ Mapelay

**DESCRIPTION** PVC waterproofing and isolating membrane for the installation of interior, resilient and textile floor coverings on cracked, dirty or damp substrates. Can also be used as an on-site floor protection during other construction phases.

**TECHNICAL DATA**

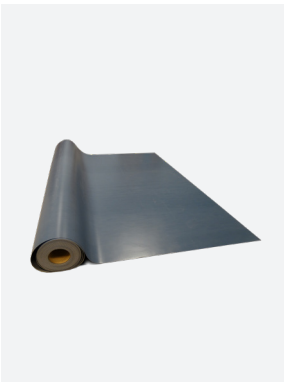
**Dimensions:** L: 25m W: 2m T: 1.5mm (50m<sup>2</sup>)

**CERTIFICATION**

**MAIN FEATURES**



**WHERE TO USE**





Mapeproof Primer

DESCRIPTION

One-component, two-coat applied, rapid drying PVDC based dispersion primer for suppressing residual moisture up to 4.5 CM-% (95% R.H.). Suitable for use over heated screeds up to a maximum of 85% R.H. Roller applied.

TECHNICAL DATA

Wait time for application of  
smoothing compound: 2 - 5hours  
(max 12 hours)

Coverage(approx 2 coats): Up to  
40m<sup>2</sup> per 10kg unit

Shelf life: 12 months

Packaging: 10kg

Colour: Turquoise

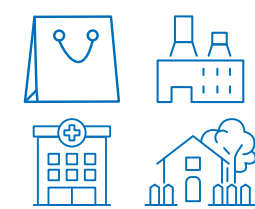
CERTIFICATION



MAIN FEATURES



WHERE TO USE







## Case Study: Good Hope Hospital

### Background:

Following a site visit to the Fothergill Building at Good Hope Hospital in Sutton Coldfield, Birmingham. The existing substrate to the main area of the fourth floor was identified as a concrete slab overlaid with an old levelling compound, and vinyl flooring adhesive residues. The concrete substrate was generally solid and sound.

### Project:

Works to the brand new, state of the art maternity suite at Good Hope Hospital were completed with the exclusive use of Mapei products for the installation of vinyl and safety flooring.

The existing compound and adhesive residues were removed and the substrate was cleaned. Once prepared, the substrate was primed with Mapei's solvent-free, acrylic based **Eco Prim T Plus**, diluted with one part to two parts of clean water. Mapei's two-part cement based smoothing and levelling compound **Latexplan No Ammonia** was then applied to infill areas. These areas were also primed with Mapei **Eco Prim T Plus**; this adhesion promoter encourages inter-coat bonding and its low odour made it the ideal choice of primer.

To ensure lower sections of the substrate met existing floor levels, Mapei **Latexplan No Ammonia** was applied, followed by a third application of Mapei **Eco Prim T Plus** to the entire floor. A third and final application of Mapei **Latexplan No Ammonia** was then applied to ensure the subfloor was completely level, and to provide a single, constant floor to receive the vinyl floor coverings – something that was essential, given the hospital setting.

Once the substrate was prepared, Sheldon Flooring – working for Main Contractor E Manton LTD – installed Polyflor Expona Flow for a contemporary finish. The vinyl sheets were bonded with Mapei **Ultrabond Eco VS90 Plus**, a high temperature universal acrylic-based adhesive with very low VOC that is ideal for use with most resilient floor coverings.

The substrate within the en-suites, were terrazzo tiles, solidly bonded and laid to a slight fall which accommodated drainage. The substrate was mechanically abraded, and once prepared, it was primed with Mapei **Eco Prim T Plus**. Mapei **Latexplan No Ammonia** was then applied to ensure a completely smooth surface. High performance, one-component polymer-silylate adhesive Mapei **Ultrabond Eco MS 4 LVT** was used to install heavy duty wet room safety flooring Polysafe Quattro, specifically designed to provide a high degree of slip resistance in continually wet areas.

The utility rooms were installed with Polysafe Vogue Ultra vinyl flooring which was fixed with Mapei **Ultrabond Eco VS90 Plus**, a Mapei adhesive suitable for resilient floorcoverings, and ideal for areas subjected to static and dynamic loads.

Following the completed work, Contracts Manager at Sheldon Flooring Dirk Baker said, "From start to finish, Mapei provided an excellent service, backed up by products you can trust."



### Products

Eco Prim T Plus

Latexplan No Ammonia

Ultrabond Eco VS90 Plus

Ultrabond Eco MS 4 LVT





## Prime

Surfaces on which resilient materials are to be installed must be sufficiently clean and free of dust, grease, oil, paint, loose particles and any other substance that could compromise the adhesion of subfloor preparation materials. As a general rule, all substrates should be primed unless specifically directed otherwise and products must be chosen according to the condition and type of substrate. The majority of subfloor preparation materials require substrates to be primed prior to application. Priming of the substrate, where necessary, and when used correctly, will improve the adhesion of subfloor preparation products to the substrate by penetrating the surface of the substrate and reducing its porosity. Priming can assist in reducing the possibility of visible air bubbles in the surface of the applied subfloor preparation materials, caused by trapped air within the substrate. On a practical level, priming the substrate will help to ascertain if there is any contamination previously unseen that will require to be dealt with. Priming substrates will also improve the overall flow rate and coverage of the subfloor preparation materials. Primer should not be used as a dust suppressant or replacement for correct preparation, but will assist in dealing with micro particles of dust.



# Eco Prim T Plus

**DESCRIPTION** Multi-purpose acrylic primer that improves the adhesion of interior levelling compounds on all types of absorbent and non-absorbent substrates. The primer has excellent bonding, flexibility, water and age resistant properties and is easily applied by brush or roller.

**TECHNICAL DATA**  
**Drying time:** 30 - 60 mins  
**Waiting time for application of smoothing compounds:** 2 - 3 hours  
**Coverage (approx):** Up to 50m<sup>2</sup> per 5kg - undiluted.  
**Shelf life:** 24 months  
**Packaging:** 20kg & 5kg  
**Colour:** Blue

**CERTIFICATION**



**MAIN FEATURES**



**WHERE TO USE**



# Eco Prim Grip Plus

**DESCRIPTION** Grey, bonding promoting primer, ideal for non-absorbent substrates, for the installation of smoothing compounds. Pre-aggregated to provide an exceptional key and high-grip surface.

**TECHNICAL DATA**  
**Drying time:** approx. 30 mins  
**Waiting time for application of smoothing compounds:** approx. 30 mins  
**Coverage (approx):** Up to 25m<sup>2</sup> per 5kg  
**Shelf life:** 12 months  
**Packaging:** 10kg & 5kg  
**Colour:** Grey

**CERTIFICATION**



**MAIN FEATURES**



**WHERE TO USE**







## Smooth: Levelling Compounds

The precautions that need to be taken when installing resilient materials are quite different to those of other floor covering materials. Consideration regarding the very nature of resilient materials being installed needs to be made, resilient flooring is usually deformable and, if subjected to concentrated loads, does not have the capacity to distribute stresses, and tends to transfer them to the underlying substrate, which therefore must have high performance characteristics.

Resilient floor coverings can be thin, only a few millimetres thick, this low thickness will not cover or hide defects or uneven areas present on the subfloor and for this reason, surfaces must always be adequately prepared with specific smoothing products. Surface regularity classes are given in BS 8204 as SR1, SR2 and SR3 relating to 3mm, 5mm and 10mm respectively.

Substrates must be prepared according to specific requirements and to make them suitable for laying floor coverings, and these requirements may vary according to their final intended use. Since substrates are usually smoothed over before installing floor coverings, the smoothing products used must also have adequate mechanical strength for required application. Classification of smoothing compounds is measured according to their compressive and flexural strength.



# ■ Latexplan Trade

**DESCRIPTION** Two-component, levelling and smoothing compound for differences in thickness of 3 to 10mm on new or existing floors. Suitable to receive all types of floor covering in commercial and domestic settings. High compressive strength 26N/mm<sup>2</sup> and low odour. Suitable for castor wheels and heated screeds. Moisture tolerant.

**TECHNICAL DATA**

**Setting time:** 45 - 60 mins  
**Set to light foot traffic:** 1.5 - 2hrs  
**Waiting time for the installation of floor coverings:** 12hrs  
**Coverage (approx):** 6m<sup>2</sup> at 3mm thickness per unit  
**Shelf life:** A: 12 months B: 24 months  
**Packaging:** 30kg kit

**CERTIFICATION**



**MAIN FEATURES**



**WHERE TO USE**



# ■ Latexplan No Ammonia

**DESCRIPTION** **Latexplan No Ammonia** is a fast setting two-component levelling and smoothing compound for differences in thickness of 3 to 10mm. Suitable for use over old adhesive residues (including bitumen) it can also be applied to plywood and ceramic tile without the need for priming. Protein free with no ammonia. Suitable for castor wheels and heated screeds. Moisture tolerant.

**TECHNICAL DATA**

**Setting time:** 30 mins  
**Set to light foot traffic:** 60mins  
**Waiting time for the installation of floor coverings:** 4hrs  
**Coverage (approx):** 5m<sup>2</sup> at 3mm thickness per unit  
**Shelf life:** A: 12 months B: 24 months  
**Packaging:** 24.4kg kit

**CERTIFICATION**



**MAIN FEATURES**



**WHERE TO USE**



# ■ Latexplan Trade Fast

**DESCRIPTION** Rapid-curing two-component levelling and smoothing compound for differences in thickness of 3-10mm on new or existing floors. Suitable for use over most adhesive residues including bitumen. Suitable to receive all types of floor covering in commercial and domestic settings. Very high compressive strength 32N/mm<sup>2</sup> and low odour. Suitable for castor wheels and heated screeds. Moisture tolerant.

**TECHNICAL DATA**

**Setting time:** 30 mins  
**Set to light foot traffic:** 60 mins  
**Waiting time for the installation of floor coverings:** 2.5 - 3hrs  
**Coverage (approx):** 5m<sup>2</sup> at 3mm thickness per unit  
**Shelf life:** A: 12 months B: 24 months  
**Packaging:** 24kg kit

**CERTIFICATION**



**MAIN FEATURES**



**WHERE TO USE**





# ■ Ultraplan Eco 3210

**DESCRIPTION** Ultra-fast hardening smoothing compound for differences of 3-10mm on new and existing floors. A highly fluid and easily workable mortar, suitable to receive all types of floor covering in commercial and domestic settings. Suitable for use over many common substrates including concrete, sand:cement screed, Mapei screeds, tiles and anhydrite based screeds containing underfloor heating. Ideal for encapsulating electrical underfloor heating systems. Suitable for castor wheels. Can be hand or pump applied.

**TECHNICAL DATA**

<b>Setting time:</b> 45 - 60 mins	<b>Shelf life:</b> 12 months
<b>Set to light foot traffic:</b> 3hrs	<b>Packaging:</b> 20kg
<b>Waiting time for the installation of floor coverings:</b> Ceramic tiles: min 3 hours	
Resilient/wood floorings: min 12 hours	
<b>Coverage (approx):</b> 5m <sup>2</sup> at 3mm thickness per unit	

**CERTIFICATION**



**MAIN FEATURES**



**WHERE TO USE**



# ■ Ultraplan Maxi 3230

**DESCRIPTION** Ultra-fast drying, water-mixed, truly self-levelling and smoothing compound. For 3-30 mm. For use internally on new or existing solid substrates. High resistance to loads and traffic. Mix with water. Very low VOC content.

**TECHNICAL DATA**

**Setting time:** 50 - 70 mins  
**Set to light foot traffic:** 3 hrs  
**Waiting time for the installation of floor coverings:** Ceramic tiles: 3-12 hours  
Resilient/Wood floorings: 24-72 h  
**Coverage (approx):** 5m<sup>2</sup> at 3mm thickness per unit  
**Shelf life:** A: 12 months  
**Packaging:** 25kg

**CERTIFICATION**



**MAIN FEATURES**



**WHERE TO USE**



# ■ Ultraplan Renovation Screed 3240

**DESCRIPTION** Fibre-reinforced self-levelling compound designed for the renovation/refurbishment of new and existing floor substrates for differences of 3 to 40mm. For use in both commercial and domestic situations. Suitable for use over many common substrates and flexible enough for use over old and new timber flooring, floorboards, chipboard panels and plywood to receive most types of floor covering. Suitable for underfloor heating systems and castor wheels. Can be hand or pump applied.

**TECHNICAL DATA**

**Setting time:** 30 - 90 mins  
**Set to light foot traffic:** 3-12 hours  
**Waiting time for the installation of floor coverings:** Ceramic tiles: 3-12 hours  
Resilient/Wood floorings: 24-72 h  
**Coverage (approx):** 6m<sup>2</sup> at 3mm thickness per unit  
**Shelf life:** 12 months  
**Packaging:** 25kg

**CERTIFICATION**



**MAIN FEATURES**



**WHERE TO USE**



# ■ Planiprep Fix

**DESCRIPTION** Ultra-fast drying, fine grained, thixotropic, cementitious skimcoat compound for the repair and smoothing of interior substrates, including floors and steps. Suitable for application from 0-4mm prior to the laying of resilient and textile floor coverings.

**TECHNICAL DATA**

**Waiting time for the installation of floor coverings:** 30 minutes  
**Coverage (approx):** 1.25 kg / m<sup>2</sup> per mm layer thickness  
**Shelf life:** 24 months  
**Packaging:** 4 x 4kg Alupack bags

**CERTIFICATION**



**MAIN FEATURES**



**WHERE TO USE**





# Product Selection Chart

TECHNICAL DETAILS	LATEXPLAN TRADE	LATEXPLAN TRADE FAST	LATEXPLAN NO AMMONIA	ULTRAPLAN ECO 3210	ULTRAPLAN MAXI 3220	ULTRAPLAN RENOVATION SCREED 3240	PLANIPREP FIX
Application method	Flat trowel	Flat trowel	Flat trowel	Flat trowel / pump	Flat trowel / pump	Flat trowel / pump	Flat trowel
Working time	20 - 30 Mins	20 Mins	20 - 30 Mins	20 - 30 Mins	30 - 40 Mins	30 - 40 Mins	approx. 7 Mins
Thickness	3-10mm	3-10mm	3-10mm	3-10mm	3-10mm	3-40mm	0-4mm
Applying floor coverings	12 Hours	2.5 - 3 Hours	4 Hours	Ceramic tiles: min 3 hours Resilient/wood floorings: min 12 hours	Ceramic tiles: 3-12 hours Resilient/Wood floorings: 24-72 hours	Ceramic tiles: 3-12 hours Resilient/Wood floorings: 24-72 hours	Approx. 30Mins
Foot traffic	1.5 - 2 Hours	60 Mins	60 Mins	3 Hours	3 Hours	3 - 12 Hours	
Coverage at 3mm	Approx. 6m <sup>2</sup>	Approx. 5m <sup>2</sup>	Approx. 5m <sup>2</sup>	Approx. 5m <sup>2</sup>	Approx. 5m <sup>2</sup>	Approx. 6m <sup>2</sup>	
Screeds containing under floor heating	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Compressive strength	26N/mm <sup>2</sup>	32N/mm <sup>2</sup>	20N/mm <sup>2</sup>	26N/mm <sup>2</sup>	35N/mm <sup>2</sup>	28N/mm <sup>2</sup>	24N/mm <sup>2</sup>
Flextural strength	8N/mm <sup>2</sup>	7N/mm <sup>2</sup>	6N/mm <sup>2</sup>	7N/mm <sup>2</sup>	8N/mm <sup>2</sup>	5.5N/mm <sup>2</sup>	8N/mm <sup>2</sup>
CE mark	C25 F6	C30 F7	C20 F6	C25 F7	C35 F7	C25 F5	C20 F7
SUBFLOOR COMPATIBILITY							
Concrete sand / cement / absorbent	Eco Prim T Plus	Eco Prim T Plus	Eco Prim T Plus	Eco Prim T Plus	Eco Prim T Plus	Eco Prim T Plus	
Non absorbent	Eco Prim T Plus or Eco Prim Grip Plus	Eco Prim T Plus or Eco Prim Grip Plus	Eco Prim T Plus or Eco Prim Grip Plus	Eco Prim T Plus or Eco Prim Grip Plus	Eco Prim T Plus or Eco Prim Grip Plus	Eco Prim T Plus or Eco Prim Grip Plus	
Power floated concrete	Abraded - Eco Prim T Plus	Abraded - Eco Prim T Plus	Abraded - Eco Prim T Plus	Abraded - Eco Prim T Plus	Abraded - Eco Prim T Plus	Abraded - Eco Prim T Plus	Eco Prim T plus
Anhydrite	Eco Prim T Plus	Eco Prim T Plus	Eco Prim T Plus	Eco Prim T Plus	Eco Prim T Plus	Eco Prim T Plus	
Suitable over most old adhesive residue	No	Yes	Yes	No	No	No	No
DPM	All Mapei DPM's	All Mapei DPM's	All Mapei DPM's	All Mapei DPM's	All Mapei DPM's	All Mapei DPM's	
Moisture tolerant	Yes	Yes	Yes	No	No	No	No
Flooring grade asphalt	Yes	Yes	Yes	Yes	Yes	Yes	No
Metal	Eporip blinded with quartz or kiln dried sharp sand	Eporip blinded with quartz or kiln dried sharp sand	Eporip blinded with quartz or kiln dried sharp sand	Eporip blinded with quartz or kiln dried sharp sand	Eporip blinded with quartz or kiln dried sharp sand	Eporip blinded with quartz or kiln dried sharp sand	No
Plywood external grade or similar	No	No	Yes	No	No	Yes	Yes
Packaging	25 kg bag and 5kg bottle	20kg bag & 4kg bottle	20kg bag & 4.4kg bottle	20kg bag	25kg bag	25kg bag	4kg bag



# Notes

[illegible][illegible]



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