

LEVELLING SCREED

- Fluid consistency for self-levelling applications
- Pumpable through standard equipment
- High early strength for rapid turnaround
- Can be used as an underlayment
- Indoor light duty wearing surface when protected with Stonhard coatings
- Portland cement base accepts liquid densifiers

PRODUCT DESCRIPTION:

Pro-Struct 518 Levelling Screed consists of a specially graded quartz aggregate, combined with blended cements, water absorbing agents, superplasticisers and redispersable powders. The hard wearing quartz aggregate has high abrasion resistant characteristics, is non-oxidising and chemically inert.

USES:

Pro-Struct 518 Levelling Screed provides hard wearing non-dusting floor surfaces for the following locations and facilities:

- Domestic Floor Applications
- Warehouses
- Bakeries
- Garages
- Reprofiling of uneven horizontal concrete surfaces
- Commercial / Retail Flooring

ADVANTAGES:

- Pro-Struct 518 Levelling Screed produces an extremely hard wearing surface with added resistance to abrasion, dusting and penetration of liquids.
- Pro-Struct 518 Levelling Screed can be coloured to produce a permanently coloured overlay.
- Improves impact resistance.
- Easy to clean.
- Pro-Struct 518 Levelling Screed, once properly applied, will provide a smooth flat surface onto which vinyl or linoleum, large format tiles, parquet, carpets and laminate floors can be laid.
- Pro-Struct 518 Levelling Screed also provides a substrate of uniform absorbency on a variety of sub surfaces. A surface with defined absorbency is particularly important for laying textile and elastic floorings using water based dispersion adhesives. These very low emission additives will usually only set properly on an absorbent substrate.
- Self-Levelling Flooring Screeds have extremely complex compositions and must meet a wide range of demands. The trend towards rapid construction means that the products must set and develop their strengths very rapidly, but at the same time, applicators require long pot lives of the product.

Pro-Struct 518 Levelling Screed meets these complex requirements.

PACKAGING & COVERAGE:

20kg Polyethylene lined bag yielding 12 litres
Approximately 3m²/20kg bag at 4mm thickness

SHELF LIFE:

One year in original, unopened packing when stored in dry conditions. High humidity will reduce shelf life.

TYPICAL PROPERTIES AT 25°C

Compressive Strength, ASTM C109	
7 Days	>27 MPa
28 Days	>30 MPa
Bond Strength, ASTM C158	
7 Days	2.0 MPa Substrate failure
Flexural Strength, ASTM C348	4 MPa
Density	2000kg/m ³
Working Time	30-45 Minutes
Set Time, ASTM C191	Initial: 2 Hours Final: 3 Hours
Application Thickness	Feather-Edge to 15 mm, 3mm if applied in large open areas
Appearance When Set	Grey concrete colour
Clean-up of Tools	Use water before product sets
Open Time	10 to 20 Minutes

APPLICATION INSTRUCTIONS

These instructions are not intended to show product recommendations for specific service. They are issued as an aid in determining correct surface preparation, mixing instructions and application procedure. It is assumed that the proper product recommendations have been made. These instructions should be followed closely to obtain the maximum service from the materials.

PLACEMENT GUIDELINES

SCOPE OF WORK (BOQ):

Prepare surfaces and prime before applying Pro-Struct 518 Levelling Screed at feather-edge to 15mm to obtain level surfaces.

DIRECTIONS FOR USE:

Base Concrete: The base concrete should have a minimum strength of 15 MPa in the case of house floors at 25 to 30 MPa for industrial floors.

SURFACE PREPARATION:

Remove all oils, grease and other contaminants by scrubbing with Carboclean 252 and rinsing with clean running potable water, to obtain a water break-free surface. Allow to dry. Abrade the surface by vacu-blasting or scarifying to remove the laitance, open all voids and expose the aggregate to a depth of 1 to 2mm. The roughened surface should be a dust-free sound concrete surface with a portion of the main aggregate in the concrete exposed. A minimum tensile strength of 2 MPa and moisture content of less than 5% is required. Refer to Surface Preparation Methods for additional information.

PRIMING:

1. Concrete shall be primed with Pro-Struct 609 at 8-10m²/litre. Once the primer has visibly dried (typically 30 minutes) apply the Pro-Struct 518, within 3 hours.
2. Where there is no damp proof membrane or chance of osmotic pressure, the use of Stondri MVT shall be used and broadcast with Stonhard 6222 Aggregate. Once the epoxy has hardened, remove excess aggregate.
3. If polishing is desired, the concrete shall be primed with Stonprime 739 at 3m²/litre and broadcast to refusal with clean and dry Stonhard # 6222 Aggregate. Once the epoxy primer has hardened, remove excess aggregate

MIXING:

All materials should be in the temperature range of 16°C to 32°C. Single bags of Pro-Struct 518 Levelling Screed may be mixed in a pail with a mechanical mixer and "jiffy" spiral at low speeds to avoid entrapping air into the mixed product. Larger projects are best mixed and placed with standard grouting or self-levelling equipment. Add the amount of water, 3.5 – 3.8 litres per bag and then add the dry product. Do not use excessive water, which will cause bleeding or segregation. **UNDER NO CIRCUMSTANCES USE MORE THAN 3.8 LITRES OF WATER PER 20KG BAG.** Mix for a minimum of 4 minutes. If bucket mixed, the product should be quickly transported to the installation area and placed immediately.

APPLICATION:

Ensure that overcoating times of the primer used have not been exceeded. Recommended thickness feather-edge to 15 mm. The product must be continuously placed to provide a smooth and uniform surface. Start in one corner, placing a continuous stream of material along one edge of the area and back lap as soon as possible for a uniform, smooth finish. Spread the material to the desired thickness with a notched rake. Use a spiked roller to remove any entrapped air bubbles. Follow the spiked roller with a smoother, frenso, or walking trowel to remove any remaining dimples caused by the spiked roller.

Construct side forms having a minimum depth of 5mm along the construction joint until the surface has completely hardened and gained full strength.

CURING:

Pro-Struct 518 Levelling Screed does not require curing with standard methods for most applications. Do not apply under hot, windy or rapid drying conditions.

PRECAUTION:

- Do not use Pro-Struct 518 Levelling Screed as a heavy-duty wearing surface for industrial floors. Steel and hard plastic wheels are detrimental to the service life of this material. Dragging wood pallets with protruding nails or screws will gouge the finished surface.
- Pro-Struct 518 Levelling Screed is meant for interior applications only.
- Direct sunlight prior to or during placement may cause outgassing of the substrate.
- Do not add admixtures or calcium chloride.
- Do not use if ambient temperatures will fall below 16°C or above 30°C within 72 hours after placement.
- Contact floor covering manufacturer for specific requirements regarding maximum moisture content, adhesive selection and intended end use of the product prior to application of floor coverings.
- Store in a dry place.
- In all cases, consult the Material Safety Data Sheet before use.
- A trial reference sample should be installed by the Applicator prior to start of contract to verify correct dry film thickness, coverages, workmanship and texture.
- Feather edging not recommended under traffic loads.

CAUTION: MAY CONTAIN FLAMMABLE SOLVENTS. KEEP AWAY FROM SPARKS AND OPEN FLAMES. IN CONFINED AREAS WORKMEN MUST WEAR FRESH AIRLINE RESPIRATORS. HYPERSENSITIVE PERSONS SHOULD WEAR GLOVES OR USE PROTECTIVE CREAM. ALL ELECTRONIC EQUIPMENT AND INSTALLATIONS SHOULD BE MADE AND GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. IN AREAS WHERE EXPLOSION HAZARDS EXIST, WORKMEN SHOULD BE REQUIRED TO USE NON-FERROUS TOOLS AND TO WEAR CONDUCTIVE AND NON-SPARKING SHOES.



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