

LEVELLING MORTAR

- Fluid consistency for semi-levelling applications
- Can be integrally coloured
- Floor can be dyed or stained within a few hours
- High early strength for rapid turnaround
- Polishable in 24 hours
- Excellent self-healing properties
- Portland cement base accepts liquid densifiers
- Can be used as an underlayment

PRODUCT DESCRIPTION:

Pro-Struct 513 Levelling Mortar is a single component 10 to 30mm cement-based semi-self-levelling mortar specially designed for easy application over existing, properly prepared concrete substrates to provide a new wearing surface that is both durable and decorative. Pro-Struct 513 Levelling Mortar can be placed and left in its natural state for a smooth, concrete finish. In addition, it can be integrally coloured, dyed, stained, epoxy coated or polished for a decorative finish. Pro-Struct 513 Levelling Mortar can be opened to foot traffic in 6 to 8 hours and can be open to rubber tyre traffic after 24 hours.

USES:

- Levelling interior sound concrete substrates
- Retail / commercial flooring
- Television studio & surgical suite levelling
- May be used as the binder for cementitious terrazzo floors
- Warehouse aisleways
- Decorative / polished wearing surfaces
- Schools / institutional floors

PACKAGING & COVERAGE:

25kg Polyethylene lined bag yielding 14 litres
Approximately 1.4m²/25kg bag at 10mm 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	
24 Hours	>14 MPa
7 Days	>20 MPa
28 Days	>30 MPa
Bond Strength, ASTM C158	
7 Days	2.0 MPa Substrate failure
Flexural Strength, ASTM C348	
7 Days	5.5 MPa
28 Days	6.2 MPa
Shrinkage, ASTM C157 (24 hours)	-0.046%
Density	2000 to 2200kg/m ³
Working Time	15-20 Minutes
Set Time, ASTM C191	Initial: 45 Minutes Final: 60 to 90 Minutes
Application Thickness	10 to 30mm
Appearance When Set	Semi-level Light Grey Concrete Finish
Clean-up of Tools	Use water before product sets

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, prime and broadcast aggregate, allowing to set, removing unbound material before applying Pro-Struct 513 Levelling Mortar at 10 to 30mm to semi-self-level surfaces.

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:

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 513 Levelling Mortar may be mixed in a pail with a drill and "jiffy" mixer 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, 3.0 to 4.0 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 4.0 LITRES OF WATER PER 25KG BAG.** Mix for a minimum of 4 minutes. If bucket mixed, the product should be quickly transported to the installation area and placed immediately. If an integral colour will be added, place the colourant in the mixing water first and then add the powder as described. For a multiple bag batch, colour and "box" all mixing water upfront to ensure even distribution.

APPLICATION:

Recommended thickness 10 to 30mm. The product must be continuously placed to provide a smooth and uniform space. 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 square rake. Use a spiked roller to quickly remove any entrapped air bubbles. Follow the spiked roller with a smoother, Fresno, or walking trowel to remove any remaining dimples caused by the spiked roller.

For areas that exceed 30mm in depth, extend each bag of Pro-Struct 513 Levelling Mortar with 12,5kg of Pro-Struct 53MC Aggregate. Place immediately. If a smooth finish is required, place the extended Pro-Struct 513 Levelling Mortar to within 10mm of the finished elevation and allow to dry. Apply a neat layer of Pro-Struct 513 Levelling Mortar on top to provide a smooth finish.

FINISHING AND DECORATIVE FINISHES:

Once the Pro-Struct 513 Levelling Mortar has sufficiently hardened to support foot traffic in 2 to 4 hours, decorative treatments such as water or solvent-based dyes / stains and acid stains can be applied. Follow dye / stain manufacturer's instructions for application and neutralisation (if necessary). If the product is going to be polished, please allow Pro-Struct 513 Levelling Mortar at least 24 hours prior to beginning this process.

CURING:

Pro-Struct 513 Levelling Mortar does not require curing with standard methods for most applications. Do not apply under hot, windy or rapid drying conditions.

PRECAUTION:

- If Pro-Struct 513 Levelling Mortar is going to be used in a decorative application, a test section must be completed to verify desired results.
- Do not use Pro-Struct 513 Levelling Mortar 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 flooring.
- Pro-Struct 513 Levelling Mortar is meant for interior applications only.
- Direct sunlight prior to or during placement may cause outgassing.
- Do not add admixtures or calcium chloride.
- If the Stonprime 739 Epoxy Primer is to be used, make sure there is a vapor barrier if this will be placed on a slab on grade.
- 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.

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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