



# Flowtop 860

*Self smoothing cementitious, heavy duty industrial flooring system*

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## **PRODUCT**

FLOWTOP 860 is a machine or hand applied industrial flooring system formulated from special cement, aggregates, supplementary binders and chemical admixtures. It is supplied as a pre-blended, dry powder designed for application at thickness between 4 and 15 mm in one operation to provide a finished floor.

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## **ADVANTAGES**

FLOWTOP 860 enables fast track construction with installation rates of up to 300 m<sup>2</sup> per hour at 6 mm thick. Under normal conditions, access onto the floor is available for foot traffic after 3 - 5 hours, with light loads within 24 hours.

FLOWTOP 860 combines excellent abrasion with rapid hardening and low shrinkage.

FLOWTOP 860 is non-dusting (see technical data).

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## **APPLICATIONS**

FLOWTOP 860 is designed for in industrial environments on both new floors and in renovation projects. It is used for the levelling and smoothing of floors subject to heavy traffic and abrasion, such as factories, warehouses and production areas.

FLOWTOP 860 is used as the wearing surface applied directly to the substrate or on top of FLOWBASE 835.

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## **SUBSTRATE**

FLOWTOP 860 is designed primarily for application on concrete substrates. The substrate should be cleaned and sound and free from material affecting bond. FLOWTOP 860 is to be applied directly to it or on FLOWBASE 835.

Uneven substrates may be pre-levelled with FLOWTOP 860. Contraction joints, construction joints and cracks in the substrate which may be subjected to movement after installation of FLOWTOP 860 must be maintained as joints in the new surface.

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## **SURFACE FINISH**

In appearance, FLOWTOP 860 can be compared to ordinary concrete flooring. Variation in colour can occur due to the laying technique used (i.e. stripes from hose movements). FLOWTOP 860 is suitable for industrial traffic without the addition of a surface coating, but to change the appearance, for ease of cleaning or as a protection against chemical attack, a suitable surface coating may be applied. Dependent upon drying conditions, coatings permeable to water vapour may be applied after 24 hours.



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## PROPERTIES

Depending on the raw materials used, the properties of the hardened material after 28 days at ambient temperature of  $26^{\circ} \pm 2^{\circ}\text{C}$  and a water content of 19%, should be:

### Technical Data:

Flexural strength (ASTM C348 : 95)	> 10 N/mm <sup>2</sup>
Compressive strength (ASTM C349 : 95)	> 35 N/mm <sup>2</sup>
Tensile Adhesion to concrete (BS 8204 : Pt 3 : 99)	> 1.0 N/mm <sup>2</sup>
Flowability (ASTM C939 : 97)	99 secs.
Abrasion Resistance (BS 8204 : Pt 2 : 99)	
[Concrete Abrasion Tester]	
@ 28 days	0.04 mm
@ (7 days air cured + 14 day aging @ 70°C)	0.05 mm
Slip Resistance (BS 8204 : Pt 2 : 99)	SRV (wet) = 69
Slip Resistance (7 days air cured + 14 days aging @ 70°C)	SRV (wet) = 68
Water absorption (ASTM C413 : 94)	4.5%
Shrinkage (ASTM C531 : 95)	0.01%
pH value	Approx. 11
Bulk density	1,600 kg/m <sup>3</sup>
Mixed density	1,900 kg/m <sup>3</sup>
Cure time (light load)	1 - 2 hours

The cure times given above are for a 10 mm layer and are dependent upon temperature relative humidity and the moisture content of the substrate.

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## WATER RESISTANCE

After curing, FLOWTOP 860 can be exposed to water spillage without damage. However, longer term saturation with water over longer periods may reduce the strength to less than its normal value with full strength returning within 24 hours of drying out.

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## CHEMICAL RESISTANCE

FLOWTOP 860 has a chemical resistance similar to that of dense concrete. If the floor is likely to be continuously exposed to chemicals, such as oils, solvents or acids, the surface must be protected by use of an appropriate coating.



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## COVERAGE

Depending on the surface to be treated. Normally approximately 10 kg of dry powder per square metre, corresponding to a layer of 6 - 7 mm thickness, is required. Dry powder consumption is 1.7 kg per mm thickness per square metre.

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## INSTALLATION

### Preparation of substrate:

The surface to be treated must be clean, sound and free from surface contamination. All dust and debris should be vacuumed from the surface. Concrete laitance and old coatings should be removed mechanically e.g. by enclosed shot blasting, scabbling or scarification. Concrete contaminated by oil or grease may require flame gunning and/or treatment with a proprietary degreaser.

### Priming:

FLOORPRIME should be applied to the prepared surface using a soft brush or a primer pump, avoiding ponding, and allowed to become touch dry (1 - 2 hours under normal conditions). FLOORPRIME should be diluted with clean, potable water at the ratio to 1:5 for the first coat and 1:3 for the second coat. Prelevelling with FLOWTOP 860 should be primed with FLOORPRIME, diluted 1:3 with water prior to application of FLOWTOP 860.

### Mixing:

FLOWTOP 860 can be applied by means of appropriate mixer pump or manually by hand. Only clean potable water should be used.

Water demand is about 4.5 to 5.0 litres per 25 kg bag.

For manual application, use of mechanical mixer is recommended. Mixing time is between 2 - 3 minutes depending on the type of mixing equipment used. FLOWTOP 860 should be used within 20 minutes.

### Application:

Door thresholds, stairs, drains and gulleys should be insulated using foam barrier strips, and larger areas should be divided into bays. The width of the bay is determined by the pumping capacity of the equipment and the thickness of the layer to be applied, but normally it does not exceed 10 to 12 metres.

The mixed material is pumped onto the surface through the discharge hose, which is moved across the surface at a constant pace when a screed of uniform thickness is required. Under normal conditions the mixer pump will deliver a nominal 6 - 7 mm layer of material. Levels may be corrected by applying greater or lesser amounts of material as required, and falls may be maintained by pumping from the higher to the lower end. The freshly applied material may be lightly trowelled with a serrated steel spatula to assist dissipation of surface bubbles and lines left by the hose. The semi-hardened material may easily be formed or cut allowing any necessary adjustments to be made.



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## **FLOOR TOLERANCES**

A level survey of the existing surface is recommended prior to the application of FLOWTOP 860. In order to achieve the required tolerance, deviations in the existing surface can be pre-levelled with FLOWTOP 860 prior to the application.

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## **PACKAGING**

FLOWTOP 860 is supplied as premixed powder in 25 kg bags.

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## **STORAGE**

Storage life is 6 months if product is kept in sheltered and dry place.

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## **CLEANING**

All tools and equipment should be cleaned promptly with water.

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## **TECHNICAL SERVICE**

For further details and advices on the products and application please contact Sales Representatives from Plasters & Mortars Division, Eastern Pretech Pte Ltd.

\*Note: Because it is not possible to give specific instructions for the various site conditions or to control the applications, the information on this Technical Data Sheet is for general guidance only.