

FH919

FLOOR HARDENER

DRY-SHAKE SURFACE HARDENER FOR FRESH CONCRETE

PRODUCT DESCRIPTION

OPTIMIX FH919 FLOOR HARDENER is a non-metallic⁽¹⁾ high quality premixed powder designed to increase wear resistant of concrete floors or slabs. Applied by dry-shake method onto freshly laid concrete to form a high strength composite surface layer. Can minimize common surface cracking and dusting problems of traditional concrete floor. Several distinct colours are available to create attractive coloured floor finishes.



TYPICAL USAGE

- For applications as good wearing resistant floors such as airline hangars, warehouses, factories, industrial facilities, carparks and other commercial flooring projects.
- For improving floor durability subject to heavy traffic and abrasion during normal operation.
- Free from casein and ammonia additives thus is also suitable for hygiene critical areas such as hospitals, kitchens etc.

FEATURES AND BENEFITS

- Superior Strength Properties
- Good Abrasion Resistance
- Reduce Crack Formation
- Uses Non-Metallic⁽¹⁾ Aggregates
- Compatible With All Common Concrete
- Consistent Quality
- A Limited Choice Of Colours & Aggregate Grades Are Available⁽²⁾
- Extremely Cost Effective
- Environmentally Friendly

(1) 'Non-Metallic' refers to the absence of Iron based hardwearing aggregates which are used in some traditional dry-shake formulations. Iron based aggregates can oxidise over time resulting in rust staining and surface degradation.

(2) Optional pigments can be added and alternative aggregate types and sizes may be made available on request, contact Optimix with your specific requirements.

TECHNICAL DATA

Product Characteristics	OPTIMIX FH919
Compressive Strength	> 80 MPa
Flexural Strength	> 12 MPa
Resistance to Abrasion	< 80 mm ³
Mohs Hardness	> Scale 7
Recommended Thickness	~ 3 mm

Note: The above are typical laboratory test results and can vary slightly depending on the ambient and substrate conditions during application.

**The coverage is highly dependent on the water usage.*

Environmental Data	
Volatile Organic Compounds (VOC)	≤ 10 g/L
Potential BEAM points	Product is manufactured within 800km of Hong Kong project sites
Packaging Composition	Paper bags incorporating 40% recycled paper

Packaging & Yield	
Coverage	1.5 – 2.0 kg/mm/m ²
Packaging (per bag)	25 kg
Shelf Life	12 months



Testing Methods	
Flexural and Compressive Strength	JC/T 906
Resistance to Abrasion	BS EN 12808 – 2 : 2002
VOC	USEPA Method 24

Note: The tests were performed according to the national standard or in-house modifications of the corresponding testing procedures.



INSTALLATION GUIDE

(Refer to Method Statement for more details)

SURFACE PREPARATION

OPTIMIX FH919 can be successfully applied onto most normal concretes having a compressive strength in excess of 20MPa, however for best results the substrate concrete should contain at least 300 kg/m³ cement and the water cement ratio and air content should be controlled to less than 0.55 and 3% respectively. **OPTIMIX FH919** may give uncertain results if used on special concrete mixes such as no fines concrete, micro-concrete, self-compacting concrete, air entrained concrete etc. If in doubt conduct trial installations to ensure the results are as desired. Job site and ambient conditions that affect drying / setting time may also affect the hardener application time.

APPLICATION

With a nominal dosage of 4 – 6 kg/m², **OPTIMIX FH919** can form a 2 – 3mm high quality wearing surface layer. It is recommended to apply **OPTIMIX FH919** by two stage applications. When the concrete is stiffened and the surface is still in moist conditions but without any sign of bleeding, approximately 60% of the pre-designed dosage should be spread evenly over the concrete surface. The dry-shake **OPTIMIX FH919** will absorb the moisture of the concrete surface. A hand trowel or machine power float should be used on the laid area to bring the moisture out of the substrate and create an even surface. Immediately after the above operation, the rest of the dosage should be spread onto the surface; try to achieve an even application thickness by filling in those areas that may have received less in the first dry-shake and add less to those areas that may have received more. The hand float or machine power float should be applied again to achieve the desired surface finish.

FINISHING

It is recommended to apply a suitable protective sealer to the power floated surface immediately to provide necessary curing as well as to enhance the finishing appearance. Alternatively a light water spray may also be used to keep the surface damp to aid curing but care should be taken not to flood the surface as this can cause weakness. **OPTIMIX FH919** does not crack significantly by itself owing to the superior low shrinkage property and monolithic bonding to the substrate. Minor surface defects, which pose no detrimental effect to the performance of flooring, such as micro hairline cracks, may occasionally occur due to substrate or other external factors beyond our control.

HEALTH AND SAFETY

OPTIMIX FH919 is alkaline in nature and can cause irritations to persons with sensitive skin. Avoid inhalation of dust and contact with skin and eyes. Wear suitable protective gloves and masks while handling the product. If contact with eyes, rinse immediately with plenty of clean water and seek medical advice. This product is non-toxic and is not flammable.

STORAGE

Store the products in a cool and dry place with the original unopened bags on pallets with plastic wrapping. Protect from direct sunlight, rainfall and exposure to high humidity conditions. Avoid excessive stacking of pallets. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging and reduce shelf life.



ALTERNATIVE PRODUCTS

Other related products from the Optimix range include:

- **F50** Easy Screed
- **FS151** Floor Screed
- **FS161** Floor Screed (Waterproofing)
- **FS191** Floor Screed (Insulation)
- **FS192** Floor Screed (Lightweight)



Important Note: The information contained herein is, the best of our knowledge, true and reliable and is supported by the present state of our knowledge. No warranty is given or implied in connection with any recommendations or suggestions made by us or our representatives as the conditions of use and any labour involved are beyond our control.



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