



奧迪美®

FS171

FLOOR SCREED (LOW DENSITY)

LOW DENSITY FLOOR SCREED FOR INTERIOR & EXTERIOR*

PRODUCT DESCRIPTION

OPTIMIX FS171 FLOOR SCREED (LOW DENSITY) is high quality lightweight cement-based screed and is a suitable base for subsequent wearing screeds, tiling and other trafficable flooring systems.

It is formulated with low density and shrinkage compensating components to achieve a stable installed density of approximately 1200kg/m³ and a compressive strength of around 8 to 12 MPa.

Supplied as a single bag requiring only the addition of water **Optimix FS171** is designed for easy trowel-down application.



TYPICAL USAGE

- ~20 to ~50mm thickness levelling for rough and uneven concrete floors.
- Screed surface to receive common floor finishes such as ceramic tiles, homogeneous tiles, granite or marble tiles, etc.
- For internal and some external* applications.

* see limitations overleaf.

FEATURES AND BENEFITS

- Low Density
- Consistent Quality
- Simple And Easy To Use
- Compatible With Common Finishes
- Low Shrinkage
- Good Workability
- Environmentally Friendly

TECHNICAL DATA

Product Characteristics	OPTIMIX FS171
Compressive Strength at 7 days	4 ~ 8 MPa
Compressive Strength at 28 days	8 ~ 12 MPa
Bond to Concrete at 28 days	~ 0.5 MPa
Coutinho Ring	No crack
Workability (Flow)	~ 150mm

Note: The above are a typical range of laboratory test results but can vary depending on the mixing method, water addition and degree of compaction applied.

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	
Density	~ 1,200 kg/m ³
Water Demand	~ 4.0 L per 10kg powder
Coverage	~ 1.2 kg/mm/m ²
Packaging (per bag)	10 kg
Shelf Life	12 months

Note: The above are approximate figures and take no account of wastage of any kind.



Testing Methods	
Flow	BS EN 1015 - 3
Compressive Strength	BS EN 1015 - 11
Adhesive Strength to Concrete	BS EN 1015 - 12
VOC Content	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

Substrate must be clean, free from unsound material, oil, grease and other contaminants.

It is recommended to clean the substrate with high pressure water jet to remove dust and loose particles.

It is highly recommended to pre-treat the substrate surface with diluted **OPTIMIX SF80** Primer. This will enhance the adhesion properties especially on variable or porous substrates.

Apply primer liberally by brush to ensure complete penetration into the surface. Remove any excess primer while the primer is still wet. Allow the primed substrate become touch dry or tacky. Poor or highly porous substrates may benefit from a second coat applied wet-on-dry.

MIXING

Mix one bag of **OPTIMIX FS171** dry powder with approximately 4.0L of potable water using a forced action mixer.

Mixing with a slow speed drill and paddle, pan mixer or horizontal shaft mixer is recommended. Free fall mixers are not suitable and should not be used.

Mix the material for about 3 to 5 minutes or until a lump-free homogeneous mix is achieved. For best results allow the mixture to stand for a few minutes to homogenise and mix briefly again before use. The water addition may be adjusted a little at this point to improve workability. The correct workability should be cohesive and easy to push into place using a trowel or shovel but not so wet that it is flowable. Note that excessive water addition will affect the density, the strength and may lead to segregation, increased density and a weak screed.

APPLICATION

The mortar should be laid to position within the working life of the mixture. This is roughly 1 to 2 hours but is highly dependent upon many factors including water addition, water temperature, mixing method, surface condition, ambient temperature, relative humidity, sunlight and drafts. The surface can be finished with a wooden float or steel trowel where appropriate.

FINISHING

The final density of the screed and the levelness of the finished surface is largely dictated by the techniques of laying or application methods. Overworking or additional compaction at the surface may increase the density of the screed.

Note that due to its porous nature the screed is mixed with an excess of water in order to achieve workability, thus it should not need any additional curing, however the screed should be allowed time to gain strength and dry before overlaying with subsequent construction.

LIMITATIONS*

Due to the nature of the product the final density and strength of the mix will depend on the water addition, mixing method, application method and finishing. Controlling and standardizing these for every mix is important to achieve consistent results.

OPTIMIX FS171 can be used in interior or exterior locations and in wet or dry interior situations. However, it is a lightweight and thus porous screed which can absorb and retain water. If necessary suitable waterproofing should be utilized to prevent unwanted water being trapped in the screed.



Properly installed **OPTIMIX FS171** bonds well to the substrate to form a rigid monolithic construction. As such it will reflect any movement in the underlying substrate. Joints in the underlying concrete should be followed through in the screed and appropriate waterproofing detail employed. Equally, any movement or live cracking in the substrate may be reflected in the surface of the screed.

HEALTH AND SAFETY

OPTIMIX FS171 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 similar products from the Optimix range include:

- **F50** Easy Screed
- **FS151** Floor Screed
- **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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