

Technical Datasheet Specialty Additive

Description

ELOTEX® FLOWKIT74 is an optimized polymer composition based on vinyl acetate, ethylene and acrylate, designed for dry mortar applications.

ELOTEX® FLOWKIT74 performs as a polymer binder with adhesion and cohesion properties and fluidifies as a PCE superplasticizer.

In addition to conventional PCE superplasticizers ELOTEX® FLOWKIT74 presents the following unique benefits:

- it provides excellent flow and levelling properties
- perfect rheology and workability
- reduced water demand and short wet out mixing time for machine applied self-levelling compounds.

It is an alternative for casein as a superplasticizer in cementitious self-levelling floor compounds as it provides a similar rheological profile both in terms of viscosity and stability. ELOTEX® FLOWKIT74 provides also a stabilizing effect, reducing segregation, sedimentation and bleeding. In most cases, no further stabilizers are needed. Furthermore it shows excellent compatibility with varying cement qualities, almost no retardation of cement hydration and improved early strength development. In addition it is compatible with all typical retarder systems such as tartaric acid, citric acid and trisodium citrate

ELOTEX® FLOWKIT74 enables high compressive / flexural strengths, high adhesion to substrate and overlayment, and good cohesion and flexibility within the cementitious layer. In addition, it improves abrasion and impact resistance while minimizing risks of shrinkage cracks.

ELOTEX® FLOWKIT74 allows formulators to easily develop and produce robust self-levelling floor formulations with wide compounding latitude with one single multi-functional additive, saving costs for raw materials and logistics.

Technical Specifications

Composition	Polymers based on vinyl acetate, ethylene and vinyl versate
Appearance	Free-flowing yellowish powder
Bulk Density	500 – 700 g/l
Residual Moisture	< 2.0%
pH-Value	4.5 – 6.5 (as 10% solution in water)
Storage Stability	6 months

Guidelines for use

Powder Processing

Elotex powders can be blended in all commercial positive mixers with other dry additives to produce finished products in powder form. Since Elotex powders exhibit thermoplastic behaviour, mixing times should be as short as possible, and significant temperature rise caused by strong shear forces should be avoided. All hydraulically and non-hydraulically curing dry mixtures with Elotex powder may be easily mixed with water before application.

For mixing finished products in powder form, one usually places the required amount of mixing water in a suitable vessel and add the powder mixture under agitation. Too intensive agitation of the mixture may result in unwanted air inclusion. Before application, one should allow the mixture to stand for a short time. Depending on the

ELOTEX® FLOWKIT74

Benefits

- Optimized for use in self-levelling compounds
- Replacement of superplasticizers and redispersible polymer powders
- Alternative for casein
- Useful to formulate finished products with very low emission according to EMICODE® EC1 PLUS
- Strong fluidification at a much lower dosage than with conventional superplasticizers (performance and cost advantage)
- Very fast and long-lasting fluidification (short mixing time and long workability time)
- Minimum retardation of cement hydration
- Excellent compatibility with varying cement qualities
- Compatible with all typical retarder systems
- Raw material and logistic cost savings

Recommended Applications

For modification of hydraulically setting systems.

Main application areas

- Use in systems containing cement such as self-levelling floor compounds, especially in thin-layer applications
- Specially suitable for ecologically demanding cement and gypsum containing floor paving products, in which pollution of living area by volatile organic components (VOC) must be as low as possible (EMICODE® EC1 PLUS)
- Also suitable for several other drymix mortar formulations for fluidification and/or for reduction of water/cement ratio (to increase strength and to reduce shrinkage)

properties of the other additives, the standing time will be in the range of approx. 1-5 minutes.

Dosage

The amount of ELOTEX® FLOWKIT74 to be used is between 0.3 – 1.0% (by weight of drymix mortar) depending on the ultimate requirements of the product.

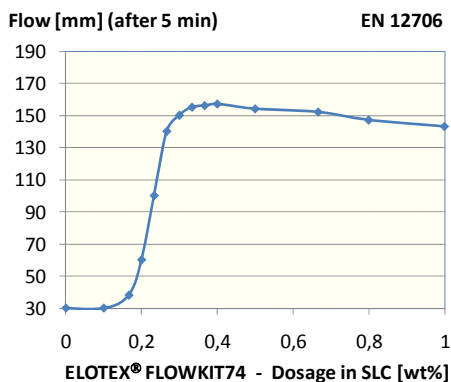
Compatibility

ELOTEX® FLOWKIT74 is compatible with all other mortar additives such as redispersible powders, accelerators, retarders, cellulose ethers and other stabilizers / thickeners, defoamers, shrinkage reducing additives etc.

Basic formulation of a fast setting self-levelling smoothing compound

Ingredients (dry mortar mixture)	Parts by weight (m%)
Portland cement	21.00 – 25.00
Calcium aluminate cement	11.00 – 13.00
Calcium sulphate (alpha hemihydrate)	3.00 – 5.00
Calcium hydroxide (hydrated lime)	0.00 – 4.00
Quartz sand	40.00 – 50.00
Limestone powder	8.00 – 12.00
ELOTEX® FLOWKIT74	0.30 – 1.00
Retarder (e.g. tri sodium citrate)	0.10 – 0.30
Accelerator (e.g. lithium carbonate)	0.00 – 0.10
Defoamer (powder)	0.00 – 0.20
Stabiliser (CE, e.g. BERMOCOLL E 230 X)	0.00 – 0.06
Mixing Water	21 – 23%

Test Results

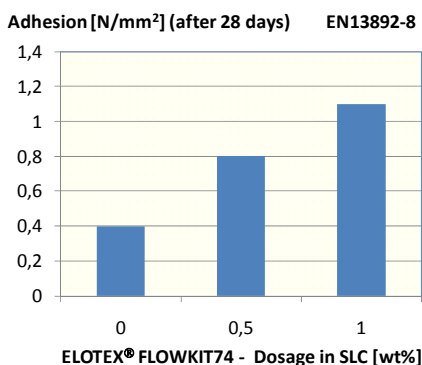


Flow (EN12706) = 150 – 160 mm

Workability time = approx. 30 min.

Compressive strength after 24 h = approx. 25 N/mm²

Adhesion after 24 hours = 1,1 N/mm²



Quality, Safety and Environment

We recommend all individuals using Elotex powder, or coming in contact with it, to observe the separate Safety Data Sheets. Our safety specialists will be pleased to advise you regarding safety, health and environmental issues of our products. Elotex has been certified according to DIN EN ISO9001 and DIN EN ISO 14001.

Packaging, Storage and Handling

Standard packaging: 25 kg paper sacks with polyethylene liners.

Store in original packaging.

As a basic rule it is recommended to store Elotex powders in a dry location at temperatures below 25°C and to process within six months after receipt of the delivery. Sacks that are stored under pressure, at increased temperature, damaged or left open for an extended period, increase the risk of caking of the powder.

Product Liability

The above information and recommendations are based upon our experience and are offered merely for advice. They do not absolve the consumer from making his own tests. Elotex AG, their representatives or distributor organizations have no control over the conditions under which Elotex powders are transported, stored, handled or used. Responsibility for damage arising from the use of our products cannot be derived from the recommendations given. The observance of any intellectual property rights of third parties is the responsibility of the consumer in each case.

Technical information may not be passed on to any third party without our previous consent.

Other Information

Version	7 / 26.10.2011
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Date of 1 st issue	14.10.2003