CEM ELASTIC

Two-component cementitous flexible coating

AREA OF USE

Protection and waterproofing of concrete structures. **Cem Elastic** is open to diffusion and acts as a carbonation retardant. It effectively protect against penetration of salts, and can withstand freeze/thaw cycles.

Some application examples

· Protection of concrete which surfaces may come in contact with seawater, de-iceing salts ect.
· Protection of concrete against diffusion of Carbondioxide, concrete pillars, beams etc with insufficient concrete cover of reinforcement bars

TECHNICAL CHARACTERISTICS

Cem Elastic is an elastic cement latex coating for the protection of concrete. The product does also bond well to bitumen based substrates. Very good crack-bridging properties and remain its elasticity down to low temperatures (-20°C).
Cem Elastic is open to water vapour diffusion and is resistant to UV rays. **Cem Elastic** is a two component system with cement/latex binder. The latex is an ammonia free acrylic copolymer in aqueous dispersion. The product is delivered component A (powder) in sack and component B (liquid) in can.
Cem Elastic is available in two shades of grey. **Cem Elastic** is a cement latex and if a uniform colour is desired, it can be painted over, e.g. with **Elastcolor Paint**.
Cem Elastic respond to the principles defined in EN 1504-9 (“*Products and systems for the protection and repair of concrete structures: definitions, requirements, quality control and conformity assessment. General priciples for the use of products and systems*») and the requirements for EN 1504-2 coating (C) («*Surface protection systems for concrete*») according to PI, MC og IR principles.

APPLICATION PROCEDURE

Preparation of the substrate

The substrate should be sound and clean before application. Large cracks and other damages should be repaired before the application starts. To ensure good adhesion the substrate must be free of all loose material, previous surface treatments or anything which could reduce adhesive properties. Sand blasting, hydroblasting or sand washing are suitable methods of surface preparation. **Cem Elastic** should not be applied if water is present on the surface. The surface should be primed with **Primer E-10**. High tempered surfaces should be dampened carefully to prevent over rapid curing. If in doubt about the substrate, a test should be performed.

Preparation of the product

Pour component B (Liquid) into a suitable and clean container and stir a little, then slowly add component A (powder) while stirring with a mechanical mixer at a slow speed. Component B shall not be diluted. Mix in a few minutes and make sure all powder is well mixed. The consistency may be adjusted by adding water (maximum 8,5 dl per batch of 35 kg). Usual mixing times are 2 - 4 minutes. The mixture should then be homogenous and lump free. The quantity mixed must be used within 60 minutes.

Application of the product

Cem Elastic can be applied by roller, brush or sprayer, depending upon the substrate, surface nature and the size of the job. Apply in 2 - 4 coats.

Correct application for spraying

After first layer is applied work this out with a rubber trowel in order to fill all pores. Apply second – third coats in the desired thickness. Application should begin immediately after mixing. Any mixture which has begun to harden cannot be used or diluted, but must be discarded. The second coat can be applied as soon as the first is sufficiently dry. Never use **Cem Elastic** in the rain or if there is a likelihood of rain or frost within 24 hours of application. Do not use **Cem Elastic** on surfaces below +8°C, even with increasing temperatures.
Normal curing times are 3 - 7 days, depending upon temperature, wind and substrate porosity.

CLEANING

All equipment and affected surfaces must be cleaned immediately with water before **Cem Elastic** hardens.

CONSUMPTION

Manual application ca. 1.8 kg/m² per mm thickness. Application by spraying approx. 2.2 kg/m² per mm.
NB! The given consumption is theoretically for an even filmthickness on an even substrate. Uneveness will increase the consumption.

PACKAGING

Kit a 35 kg: Component A: sack a 25 kg. Component B: can a 10 kg.

STORAGE

12 month in unopened original packaging, component A must be stored dry, component B must be stored frost free.

SAFETY INSTRUCTIONS FOR PREPARATION AND INSTALLATION

Instructions for the safe use of our products can be found on the latest version of the SDS available from our website **www.mapei.no**

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

Cem Elastic: Two component flexible cementitious mortar for protection and waterproofing of concrete structures in compliance with the requierements in EN1504-2(C) PI, MC, IR

PRODUCT DETAILS	Component A	Component B
Methods 1.3, 2.2 and 8.2		
Colour:	grey	white
Appearance:	powder	liquid
Maximum aggregate size (mm):	0.3	
Dry solids content (%):	100	54

PRODUCT APPLICATION DATA (at +20°C - 50% RH)	
Colour of mix:	grey
Mixing ratio:	100 parts of **Cem Elastic** part A with 40 parts **Cem Elastic** part B 2.5:1
Consistency of mix:	semi-liquid
Density of mix (kg/m³):	approx. 1730
pH of mix:	>12
Application temperature range:	from +5°C to +35°C
Pot life of mix:	1 hour

FINAL PERFORMANCE (when mixed 2.5:1, thickness >1.5 mm)			
Performance characteristics for product	**Test methods**	**Minimum requirements according to EN 1504-2**	**Product performance**
Permeability to CO_2:	EN 1062-6	S_D > 50 m	630 m
Permeability to water vapour:	EN ISO 7783-1	Class I SD < 5 m	0.33 m
Capillary absorption and permeability to water:	EN 1062-3	w < 0.1 kg/$m^2 \cdot h^{0.5}$	0.014 kg/ $m^2 \cdot h^{0.5}$
Adhesion strength by pull-off test:	EN 1542	Without trafficking ≥ 0.8 N/mm^2	> 1.5 N/mm^2
Adhesion after thermal compatibility (freeze-thaw cycling with de-icing salt immersion):	EN 13687-1	Without trafficking ≥ 0.8 N/mm^2	> 1.1 N/mm^2
Diffusion of chloride ions:	SVV report 2034		> 95 % reduction
Crack bridging ability:	EN 1062-7	Classes A1 to A5	A3 (-30°C)
Reaction to fire:	Euroclass	Classified by MPA Dresden	E

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above - information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application: for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application: in every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the technical data sheet, available from our web site www.mapei.no

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