

Bonding agent and admixture for the preparation of polymer-modified mortar and concrete

AREA OF USE

Cementol Elastosil 34 is an aqueous dispersion of synthetic rubber that enables the preparation of:

- polymer-modified mortars and concretes resistant to increased mechanical, physical and chemical stresses,
- repair mortars,
- adhesive mortars,
- bonding bridges between hardened [old] and fresh concrete or mortar.

TECHNICAL CHARACTERISTICS

Characteristic	Declared value
Appearance	Milky-white liquid
Density, 20 °C	approx. 1 kg/L
pH	5.5 ± 1.0

ACTION

The polymer molecules are deposited on the surface of the cement particles during hydration and aggregate to form a continuous film after hydration is complete. The resulting polymer network interweaves the hardened cement gel and connects the aggregate and cement paste. This improves the quality of the hardened cement paste as well as the contact between the cement paste and the aggregate grains.

CONSUPTION AND INSTRUCTIONS FOR USE

1. POLYMER-MODIFIED CONCRETE OR MORTAR

Preparation of solution

Cementol Elastosil 34 is mixed into water-diluted concrete or mortar, with the dilution rate determined by the complexity of the work performed and varying within the limits of:

Cementol Elastosil 34 : water = 1 : 1 to 1 : 3 [parts by weight or by volume]

Preparation of concrete/mortar

Prepare only the amount of concrete/mortar that can be used immediately.

The solution of diluted Cementol Elastosil 34 and water is dosed in such a way that it allows the preparation of suitable or desired workability concrete/mortar.

Substrate preparation

Concrete/mortar containing Cementol Elastosil 34 is applied to a pre-prepared substrate:

The substrate must be clean, firm and moistened. Remove all impurities, dust, old paints, greases, and poorly bonded parts first.

It is best to soak the substrate thoroughly with water the day before you begin working, and then remove any excess [standing] water just before you begin, so that the surface is "matte" moist.

If the surface to be repaired is **very porous**, it can be previously impregnated with a primer prepared by diluting Cementol Elastosil 34 with water in the ratio:

Cementol Elastosil 34 : water = 1 : 4 to at least 1 : 3 [parts by weight or by volume]

Consumption for impregnation is dependent on substrate dilution and absorption and amounts to approx. 0.02 – 0.10 kg/m².

Installation and curing

We respect the principles of good practice when concreting/installing and curing for fresh concrete. Freshly installed concrete/mortar must be protected from excessive drying [wind, drafts, sun] with damp tarpaulins, foils, or fresh concrete protection agents Kontrasol 22 V or Kontrasol NOVI. In winter conditions, however, we must take care of frost protection.

Cleaning of work accessories

The mixer, containers, and tools must be washed with water as soon as the work is finished.

When designing a concrete mixture, we respect the requirements and principles of the EN 206 standard: Concrete - specification, performance, production and conformity, as well as the relevant national provisions.

2. BONDING BRIDGE ACCORDING TO THE FRESH TO FRESH SYSTEM

Prepare only the amount of bonding layer that will be used immediately.

Composition of the bonding layer

Cement:	usually CEM II/B-M[L-S] 42,5 N or CEM II/A-M[LL-S] 42,5 R
Sand:	construction fine sand or stone aggregate 0/4 mm
Ratio:	cement : sand = 1 : 1 to 1 : 2
Liquid:	Cementol Elastosil 34 : water = 1 : 2 to 1 : 3

Preparation of liquid

Cementol Elastosil 34 is mixed into the water-diluted bonding layer, with the dilution rate determined by the complexity of the work performed and varying within the limits of:

Cementol Elastosil 34 : water = 1 : 2 to 1 : 3 [parts by weight or by volume]

Substrate preparation

The bonding layer will be installed on the substrate, which will need to be further prepared.

The substrate must be clean, firm and moistened. Remove all impurities, dust, old paints, greases, and poorly bonded parts first.

It is best to soak the substrate thoroughly with water the day before you begin working, and then remove any excess [standing] water just before you begin, so that the surface is "matte" moist.

Preparation of the bonding layer

Prepare only the amount of bonding layer that can be used immediately.

First mix the dry components – cement and sand. While stirring, add the liquid [solution of Cementol Elastosil 34 and water] to the dry mixture until a homogeneous mass with suitable workability is obtained.

Installation and curing

Apply the prepared mass to the substrate at a thickness of about three times the maximum thickness of the sand used. Apply as much as you can cover with cementitious screed or concrete in 30 minutes [installation fresh on fresh].

After the work is completed, the fresh screed or concrete is protected from excessive evaporation of water or freezing.

Cleaning of work accessories

The mixer, containers, and tools must be washed with water as soon as the work is finished.

Consumption for the bonding layer

approx. 0.5 kg/m² for a bonding layer of approx. 5 mm thickness and at dilution with water 1 : 3.

ADVANTAGES OF USE

- Improvement of mechanical properties of concretes and mortars.
- Improvement of adhesion of fresh concrete/mortar with already hardened concrete/mortar.
- Improvement of mortar/concrete resistance to the action of salts, dilute acids and alkalis, oils, and gasoline.
- Improved workability of fresh concrete/mortar.
- Improved impermeability or lower permeability of water, oils, and petroleum products.
- Increased abrasion resistance.

PACKAGING

drums 50 kg, IBC containers 1 m³

STORAGE

- The product should be stored at temperatures between +5 °C and +35 °C. We need to protect it from damage, freezing and direct sunlight.
- A properly stored product has a shelf life of at least 2 years after the date of manufacture.
- The product may still be used after the date of expiry, but the characteristics important for the intended use have to be examined.

HEALTH, SAFETY AND ECOLOGY

When working with Cementol Elastosil 34, wear protective gloves. Follow the general instructions for working with chemicals: take care of cleanliness, do not eat, drink or smoke while working. After finishing work, wash hands thoroughly with water.

More information on safe handling and disposal of the product is available in the safety data sheet, which is provided on request, and is also available from the dealer or distributor where you purchased the product.

WARNING

Instructions and recommendations are given based on examinations in our laboratories and experience to date. Due to specific conditions and work methods, preliminary tests are advised for every type of use, for each individual case of use of the product alone, or in combination with other admixtures.

Since we cannot influence the course of work, we cannot be held responsible for its quality!



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