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**Data Sheet**  
**Code 1.6.03**  
**Code 1.6.04**

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## ELASTOCEM

Civil Construction Approval- AT 007-03/248-2008 - Incerc Cluj

Approval regarding road and industrial infrastructure –AT 004 – 07/988 – 2007 – Incertrans

Approval for Elastosistem-type hydro insulation for bridges, viaducts and roadways - AT 004–07/1033-2008 - Incertrans

**Product type** Waterproofing mortar for the protection of brick or cement-based structures, the protection and waterproofing of concrete, prestressed concrete structures, of cement screeds and coatings.

**Short description of product:** *ElastoCEM* is a bicomponent product (A and B). Component A is a powder mixture made up of cement, selected inert materials and specific water-soluble additives. Component B is made up of synthetic polymers in aqueous dispersion.

After its correct application in a layer of maximum 2 mm thick and after its proper maturation due to high content of synthetic resins and their exceptional quality, the product has a very good stability and elasticity in any weather conditions, being resistant to very high temperature changes.

The **ELASTOCEM** layer correctly applied is **completely waterproof** up to 1.5 atm. and is **totally inert** to the action of: CO<sub>2</sub>, SO<sub>2</sub>, carbon anhydride, sulphatic salt solutions, calcium chloride (CaCl<sub>2</sub>) or sodium chloride (NaCl), used for de-icing.

The adherence of the **ELASTOCEM** product is excellent on all surfaces made from concrete, mortar, ceramics (> 1.3 N/mm<sup>2</sup>) provided that these surfaces are compact, solid, sound and clean;

**Areas of application:** *ElastoCEM* product is used for the following:

- The waterproofing protection carried out by filling reinforced concrete structures which could come into contact with salts and calcium or sodium

chloride, sea water and sulphurous salts

- Waterproofing and elasticity protection, carried out by filling, against aggressive atmospheric agents (CO<sub>2</sub>, SO<sub>2</sub>, carbon anhydride), of elastic structures made of reinforced concrete, beams, prestressed beams which are exposed to crazing risk caused by loads.
- Waterproofing and insulation for interior and exterior surfaces on concrete water tanks, balconies, bathrooms, terraces and pools.
- Filling-based protection against aggressive atmospheric agents, of coatings and concrete types which present hardening contraction cracks
- Protection and waterproofing of the road and industrial infrastructure made of concrete, reinforced concrete / prestressed reinforced concrete, cement screeds (for example: protection against carbonation, against the action of CO<sub>2</sub> or SO<sub>2</sub> or against the action of the aggressive solutions used for de-icing such as CaCl<sub>2</sub> or NaCl, for de-icing piers, beams, poles, on bridges, roadways or road and train viaducts and reinforced concrete structures which have a small degree of covering iron).
- Protection and/or waterproofing of the road and industrial infrastructure made of concrete, reinforced concrete / prestressed reinforced concrete.
- The waterproofing of tracks on bridges, viaducts and roadways or railway crossing.
- Waterproofing of flush reinforced concrete elements and structures used for foundation of bridges, viaducts, roadways and railway crossing.
- Waterproofing of inner concrete floors made of concrete, prestressed concrete, screed, of brick structures, of ceramic/ autoclave-cured cellular concrete blocks on which ceramic plates or PVC coverings are mounted (for example: bathrooms, kitchens...)
- Waterproofing of the interior part of pools or drinking water tanks
- Waterproofing of terraces, balconies, pools before cladding them with floor tiles, glaze, mosaic or natural stones
- Filling-based protection against aggressive atmospheric agents of elastic structures made of reinforced concrete, beams, prestressed beams which are exposed to crazing risk caused by loads (for example: prefabricated panels)

**Technical data:**

	<b>COMPONENT A</b>	<b>COMPONENT B</b>
Physical form	powder	liquid
Colour	grey	white
Apparent density, g/cm <sup>3</sup>	approx. 1,4	approx. 1,1
Solid residue	100	50
Specific consumption upon manual application	approx. 1.7 kg/m <sup>2</sup> /mm thick	
Specific consumption upon machine-based application	approx. 2.2 kg/m <sup>2</sup> /mm thick	
Specific density of paste, g/cm <sup>3</sup>	1.4 ... 1.8	
Pot life	60 minutes	
Application temperature	+ 8°C - + 30°C	

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Bending strength per 28 days	Approx. 2.00 N/mm <sup>2</sup>
Compressive strength per 28 days	Approx. 14.5 N/mm <sup>2</sup>
Adherence to concrete	Approx. 1.35 N/mm <sup>2</sup>
Adherence to brick	Approx. 2.10 N/mm <sup>2</sup>
Waterproofing (capillarity coefficient)	Maximum: 0.021 g/dm <sup>2</sup> minute <sup>1/2</sup>
Tracking strength: - tracking deformation rate: - track depth	0.8 mm/h, 2.7 mm
Resistance to frosting-defrosting after 28 cycles	1.11 kg/m <sup>3</sup> .

**Instructions for use:**

**Application of product is carried out only by trained and skilled workers in mortar applications, in the following stages:**

**1. Checking the base surface:**

Checking the base layer is an important stage in the process of applying the product.

The surfaces upon which **ELASTOCEM** is applied should have the following features:

- a. they should be made of concrete, reinforced concrete, precast concrete, prestressed concrete, cement screeds or cement coatings with corresponding maturity;
- b. they should be flat and smooth.
- c. they should be clean, dust and salt free, with no anti-adhesive substances (grease, bitumen, dust, gypsum, dye, old wall painting etc.), with no traces of grout or substances which remove forms from concrete, with a normal water absorption;
- d. crack free. Capillary cracks are allowed; they occur due to hydraulic intake, drying and hardening of the base layer. Other cracks caused by incorrect application of the base layer and which are major (> 0.5-0.6 mm), moving and which worsen simultaneously with the process of hardening are not allowed.
- e. resistant, compact and free of any brittle parts.

**2. Preparing the product:**

In order to obtain the paste, component A is mixed with component B as follows:

- component B (liquid) is poured into a container;
- component A is slowly added while mechanically stirring.

**NOTE: No water, cement, aggregates nor other compounds should be added so as not to modify the technical characteristics of the product.**

It is essential that the mixing procedure be carried out without creating too much air bubbles in the paste and comply with the stages and moments of mixing, in order to allow the chemical reactions to take place.

For these to take place, the mixture is created only with a specialized rotating mechanical device (hydraulic or pneumatic), with low revolutions (maximum: 500 rev/min) and high power (minimum: 1,200 W), fitted with a mixing rod

specially designed for mortars. Component A shall be poured over component B. Then they will be mixed for approx. 2 - 4 minutes. If necessary, the paste shall be mixed until it is completely homogeneous. Attention should be paid so that no undispersed powder remains on the sides and bottom of the container. An easy-to-apply paste is obtained; it can be applied up to a maximum **thickness of 2 mm**. The product is waterproof up to a pressure of + 1.5 atmospheres.

### **3. Product application:**

#### **a. Manual application of ELASTOCEM:**

The ELASTOCEM product can be used within maximum 60 minutes from its preparation. On the surface prepared according to point 1, with the help of a grouter, a levelling of the surface is carried out, for the purpose of obtaining a paste adherence to 100 % of the base.

Then the first layer is applied so that a thickness of approx. 2 mm/layer is obtained. It is extremely important that the layer of product applied should not be more than 2 mm thick, otherwise, cracks may occur.

For large surfaces and for surfaces which undergo high mechanical stresses, the layer is reinforced with a glass fibre net with a density of 145 – 165 gr/m<sup>2</sup>.

In this sense, the product is spread out with the hawk, then, the net is applied and levelled gently with the hawk until the reinforcing net becomes part of the applied layer.

At the joint between the reinforcing nets, the nets will overlap for at least 10 cm. For surfaces exceeding 20 m<sup>2</sup>, expansion joints will be created.

In this sense, ELASTOBAND rubber bands are used.

If the base has structural joints or expansion joints, then the joints made using ELASTOBAND will be superimposed over these.

At the joints between two elements (wall/wall, wall/floor etc.), reinforcement with ELASTOBAND shall obligatorily be carried out.

If necessary, the second layer is applied taking into account the weather conditions, 5-8 hours after applying the first layer, so that a maximum thickness of 2 mm/layer is obtained.

For waterproofing terraces, balconies, bathtubs and pools, it is always recommended to also use a glass fibre net frame with a specific weight of 150 g/m<sup>2</sup>. The first layer is applied with the hawk. The glass fibre net is applied by pressing it with the hand or hawk so that it permeates up to approx. 50% of the total thickness of the layer. The net will be overlapping at least 10 cm at the joints between the straps.

After the net is applied, the layer thus obtained is finished with the hawk to also incorporate the net; therefore, a flat and smooth surface shall result (the glass fibre net is incorporated in its middle area).

The total time needed for applying the mortar, inserting the net and finishing it (by filling) shall under no circumstances exceed 10 minutes. The final layer obtained should have enough thickness so that the glass fibre net can be completely

incorporated into the layer.

At the joint between the floor and masonry, the related product *ElastoBAND F* shall be used. Along the whole length of the joint between the wall and the floor, a thin layer of *ElastoCEM* is applied, on top of which *ElastoBAND F* is attached. After being fixed into position, *ElastoBAND F* shall be covered with *ElastoCEM*. *ElastoBAND CI* or *ElastoBAND CE* shall be used at the interior or exterior corners.

*ElastoBAND T* shall be used for piping passages.

In case the product is used on structural elements which undergo hydrostatic counter pressures, the surface shall be treated with RENOVA ANTISARE and RENOVA APA STOP.

In case the base layer has cracks which will not endanger its stability in the future, the cracks will be filled.

For cracks with a maximum width of 5 mm, the crack place shall be cut in a V shape all along its length, the eventual dust will be cleaned, and a type of adhesive mortar with additives and synthetic resins of flexible type, GLASSKOL (C2TE) shall be applied.

In case the cracks are more than 5 mm wide, the filling of the cracks shall be carried out with a screed mortar type M100. The mortar shall be activated by replacing 20% of the mixture water with HIDROFLEX.

For old surfaces to which there is a risk that the repair mortar could have low adherence (old concrete structures, carbonated, coring structures), before the mortar to which HIDROFLEX has been added is applied, the surfaces will be treated with HIDROCEM, a mortar with osmotic permeation.

For surfaces having high absorption features, the base layer shall be watered and be left to dry before applying the **ELASTOCEM** product. It is forbidden to apply this product on a layer of water.

#### **b. Machine-based application of ELASTOCEM with the help of gunite:**

Is carried out after the surface is prepared according to point 1.

Is carried out with the help of a spraying device or a machine capable of applying a layer with a maximum thickness of 2 mm. In case a thickness exceeding 2 mm is needed, the product shall be applied in more layers.

The multi-layer application procedure is carried out 4-5 hours after applying the previous layer.

In the areas affected by crazing or which are exposed to high mechanical stresses or for surfaces larger than 20m<sup>2</sup>, it is recommended to insert a glass fibre net in the first newly applied layer.

#### **4. Final recommendations:**

- a. Do not stir the product manually;
- b. Component A is only mixed with component B;
- c. Do not use the product at temperatures lower than +8°C or exceeding + 30°C;
- c. The surface on which Elastocem has been applied has to be protected from rainfall or accidental water leaks within the first 24 hours after its application;

e. In case bathrooms or drinking water tanks are insulated, before using the area, it is necessary to wait 28 days from the date of applying the product and then to execute repeated warm water washing operations.

d. During dry, extremely warm periods, or windy periods, the applied product shall be protected against accelerated drying by covering it with a damp cloth or by spraying a specific anti-evaporation agent.

**Packaging:** Component A - sacks weighing 25 Kg;  
Component B - 9 l canister

**Storage:** Component A is stored for maximum 12 months in a dry place, in its original package, placed on the pallet.  
Component B is stored for maximum 24 months in its original package at temperatures higher than 8°C and lower than 30°C

**Marking:** Each sack is marked by being stamped, on the bottom, with the following information: date of production – five groups of figures symbolizing:  
**the day, the month, the year ending, production line number, production batch number.**

**Warranty:** The product has a 12 month warranty beginning on the date of production marked on the package; this warranty applies only for the storage conditions mentioned above.

**WARNING**

- **The prepared product is alkaline. During handling and transport, goggles, gloves and anti-dust masks should be worn. In case the product gets accidentally into your eyes, wash immediately with lots of clean water and then quickly contact a doctor!**
- **Products with damaged packaging should not be used.**
- **The unused items should not be discarded into the sewerage system**

• Head of Department: Product Quality-  
Development

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• General Manager

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**Note 1:** The present data sheet accompanies each invoice or waybill which refers to the product presented in the sheet.

**Note 2:** It is forbidden to reproduce parts or fragments from the present data sheet.

**Note 3:** The present data sheet has been drawn up to properly inform the user about the presented product. The use of this sheet for other purpose than informing you about the product and preparing the technological specifications regarding application is strictly forbidden without the written consent of ITAL-KOL.

**Note 4:** For other additional information, which you consider you should receive or you find useful, we recommend that you contact the producer in writing, before using the product. Any producer liability regarding failures in applying the product resulted from misinterpreting the text of the present data sheet or from verbal consultancy is excluded.

**Note 5:** The data presented in the product data sheet and, mainly, the instructions regarding the manner and area of application of the product are based on the skills and practical experience of the person applying the product. Due to a large variety of materials, tools or working conditions which we cannot totally control or foresee or which, even if they are clearly mentioned in the product data sheet, are not correctly assessed by the person applying the product, in each case we recommend, before use, to carry out individual tests of applying the product, so that you can be sure that the product the present data sheet is describing is suitable for your respective field of application.

Any producer liability regarding failures in applying the product resulted from the causes mentioned above in this sheet is excluded, except for the event when the damages resulted only from the poor quality of the product that the present data sheet refers to.

**Note 6:** Depending on the evolution of the technical regulations applicable, the producer preserves the right to modify the present data sheet. For the purpose of confirming the data in the sheet, we recommend you to visit the web page: web [www.italkol.ro](http://www.italkol.ro) prior to using the product data in the sheet, we recommend you to visit the web page: web [www.italkol.ro](http://www.italkol.ro) prior to using the product