



Dehumidification systems, water repellent treatments, thermal and acoustic insulation, waterproofing



Certified Quality System since **FEBRUARY 1993**

## From Project to Jobsite

# CRYS-teco® TENSIOS

## WATERBASED REACTIVE IMPREGNATION FOR THE WATERPROOFING AND BARRIER EFFECT OF CONCRETE STRUCTURES

**Description** CRYSteco® TENSIOS is a product based on silica reactive surfactants in water based dispersion, formulated for the sealing of micro-porosity in concrete. The product can penetrate from 2,5 to 5 cm in the concrete structure to react and form waterproof crystallisation residues. CRYSteco® TENSIOS is a transparent waterproofing treatment for external surfaces in concrete such as tanks, basements, bridge pillars etc, and is applied on the vertical or horizontal surfaces, even when exposed to harmful ambient conditions, sulphate attack or chloride contamination. CRYSteco® TENSIOS penetrates deep in the concrete, will react chemically with the substrate and forms a protective crystallisation barrier. The product contributes to the increase of mechanical resistance and wear resistance of the substrate.

- Advantages**
- Increases the durability of concrete structure, inhibiting the infiltration of water, salts, or other harmful chemicals present in the atmosphere.
  - Increases the resistance to frost/thaw cycling.
  - Reduces the water absorption and improves the aspect of the surface, reducing efflorescence.
  - Can be applied to humid substrates in one layer.
  - The treatment is transparent, not coloured. Reduces the dirt algae and bacteria formation on surfaces.
  - The product crystallization could create superficial white shadows which may be easily removed. Over time it increases the gloss of the surfaces.
  - The product allows excellent water vapour permeability from the substrate.
  - The product is environmentally friendly and VOC free.

**Indicated use** To be used for the protection, the transparent sealing and waterproofing of old or new concrete structures, prefabricated, bridge beams or pillars, reservoirs, cooling towers and underground structures to be protected from rising humidity.

- Method of use**
- The substrate to be treated must be free from algae, bacteria growth, incoherent parts or previous treatments which can jeopardise a good penetration of CRYSteco® TENSIOS. This can create not uniform absorption and the formation of spots on the substrate.
  - For new concrete structures it is necessary to remove all traces of demoulding oils.
  - CRYSteco® TENSIOS is ready-to-use product and therefore, before the application, it is necessary a simple mixing by hand.
  - Do not apply when temperature is below +10°C or above +33°C.
  - Protect the application at least for 4 hours against rain.
  - Apply by brush, or by low pressure spray equipment. Do not atomise.
  - Apply always in small areas, from the bottom side to the top, letting the product percolate at least 30 cm.
  - Apply in 1 layer.
  - For horizontal applications, the product can be poured and distributed uniformly by broom till saturation.
  - The best penetration can be obtained on dry substrates, however, in the case they are too dry, a foggy spray with water is recommended to break the surface tension.
  - Clean immediately with water in case of spillages.
  - Avoid spillage on non porous substrates like glass or metal.

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**Remark** Do not use for acidified floors. Protect from frost. Apply at a temperature between +5°C and +30°C. Avoid the contact with glass surfaces.

**Consumption** With 1 Kg, 2-3 m<sup>2</sup> can be treated depending on the porosity of the substrate. It is advisable to perform a test on 1 m<sup>2</sup> to determine the proper consumption.

**Storage** The product can be kept in the original, not opened packaging during 6 months, providing a proper storage in a dry and protected area, at temperature not over + 33°C. Protect from frost.

**Packaging** 20 kg can

<b>Technical characteristics (typical values)</b>	• Ready to use liquid	Colourless and odourless liquid,
	• Toxicity	Not toxic
	• Flash point	Not flammable
	• Curing	30 – 40 days
	• Penetration depth	> 2 cm, depending on the porosity of the substrate

**Remark** As general advise, it should be warned not to use reactive aggregates for the preparation of the concrete.

**Safety indications** Read carefully the safety indications on the packaging and consult the relevant Material Safety Data Sheet of this product.

The above information is based on our best experiences and lab results and on results of the application of the product in various fields. Tecnochem Italiana is not responsible for negative performances due to not proper use of the product or for defects due to elements not connected with the quality of the product included wrong storage. Technical characteristic in this technical data sheet are up-to-dated periodically .Revision date of this technical data sheet is indicated below.

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