

# Vetrofluid®

## TOTAL CONCRETE PROTECTION

FOR PROFESSIONAL USE ONLY - REVISION DATE 3 JUNE 2021

**Ecobeton Vetrofluid® is a special waterproofing agent for protecting concrete from deterioration. Its formula is based on waterglass with a special catalyst that allows the product to penetrate into the concrete from 10 mm to 40 mm.**

**Ecobeton Vetrofluid® seals the pores of the concrete and becomes a permanent waterproofing barrier.**

**Ecobeton Vetrofluid® permanently waterproofs, hardens and protects all types of concrete from degradation.**

## Properties

**Ecobeton Vetrofluid®** guarantees permanent waterproofing of concrete even with negative pressure to 14 atm. It is a permanent and definitive treatment.

**Ecobeton Vetrofluid®** provides the concrete with an extraordinary resistance to freezing and thawing cycles, and chlorides, sulphates and de-icing salts attack.

**Ecobeton Vetrofluid®** completely blocks the phenomenon of carbonization of steel and the penetration of chlorides (UNI 9944). It keeps a stable alkaline environment over time and totally protects the reinforced bars.

**Ecobeton Vetrofluid®** is certified for use in contact with drinking water and is suitable for waterproofing and protecting concrete tanks and surfaces for use in contact with food stuffs. Ecobeton Vetrofluid® provides concrete with excellent resistance to chemical attacks.

**Ecobeton Vetrofluid®** blocks penetration of water/rising dampness when applied to the foundation. (positive or negative side).

**Ecobeton Vetrofluid®** prevents the concrete from releasing cement dust into the environment, effectively obstructs the penetration of pollutants and therefore improving the environment.

**Ecobeton Vetrofluid®** improves fire resistance, it is completely fireproof and keeps its features at any temperature, compatible with the physical limits of the treated concrete.

**Ecobeton Vetrofluid®** can be used on driveways and it is compatible with other finishes and overlays.

**Ecobeton Vetrofluid®** is an odorless, colorless and non-toxic product.

**Ecobeton Vetrofluid®** is compliant with prescriptions of the 89/106 EEC Directive and meets the requirements of the standard CE 1504-2.

## Uses

- Underground walls to waterproof from both inside and outside.
- Concrete bridges, underpasses, parking structures, dams and tunnels to waterproof and protect from deterioration and corrosion.
- Purification plants, wells and storage tanks in contact with aggressive substances.

- All immersed concrete structures to block attacks from chlorides.
- Biogas plants and dugouts to protect the concrete from biomass, gases and leachates.
- Farm structures and cellars (cattle sheds, chicken coops, barns for cereals and hay, and piggeries).
- Drinking water tanks.
- Protects concrete in sewage and wastewater applications.
- Protects concrete in contact with aggressive acids, chemicals and hydrocarbons.
- Protects concrete subject to severe climatic conditions.
- Foundations to block water and dampness intrusion (positive or negative side application).
- Stops basement slab moisture and dampness penetration.
- Anywhere you want to increase the durability of concrete.
- Burial crypts, vaults or tombs.
- Precast cement pipes and irrigation channels.
- Any exposed concrete.
- Precast concrete structures and Jersey barriers.

## Technical features

Composition	Proprietary blend of waterglass in aqueous solution
Expiry	36 months if stored sealed
Flammability	Not flammable
Organic properties	Odorless, colorless liquid
Storages	Store in a dry place. Keep away from glass and Aluminum.
VOC Content	None
Curing	3 – 8 days. Walkable after a few hours.
Packaging	1-gallon & 5-gallon standard, special order 275-gallon totes

# Certification



Ecobeton Italy Srl  
Via Galileo Galilei 47, 36030 Costabissara (VI)  
**08**  
**Certificate no GB08/76012**  
**DOP no 140107DOP-1504-2**

## UNI EN 1504-2:2005 Ecobeton – Vetrofluid®

Products for the concrete protection on buildings and works of civil engineering impregnation

EN 133g	Abrasion resistance: improvement > 30%
EN 1062-3	Capillary absorption and water permeability: $w < 0.1 \text{ kg/m}^2 \times h^{0.5}$
EN 13529	Chemical resistance (astringent attack): no visible defects
EN 13687-1	Thermal compatibility: $\geq 1.5 \text{ N/mm}^2$
EN ISO 6272-1	Falling-weight test: Classes III: $\geq 20 \text{ Nm}$
EN 1542	Bond strength by pull-off: $\geq 1.5 \text{ N/mm}^2$
EN 13501-1	Reaction to fire tests: Euroclass A1 Slip/skid resistance: NA Depth of penetration: > 10 mm Dangerous substances: absent

The above technical data has been obtained with a dosage of 400 g/m<sup>2</sup>

### Tests according ASTM

(American Society for Testing and Materials International)  
Waterproofing & Concrete Protection Product Test

MTO LS-412	Salt Scaling Resistance: 0,123 kg/m <sup>2</sup> (std < 0,8 kg/m <sup>2</sup> )
MTO LS-417	Chloride Content: 0,231% by mass (< 16%*)
ASTM C1202	Rapid Chloride Ion Penetrability: 448 C (< 61%*)
ASIM E96	Water Vapor Transmission: < 26%*
ASTM C1585	Rate of absorption: < 52%*
ASTM C666-A	Freeze/Thaw Durability: no weight loss 15% NaCl Solution Absorption <sup>1)</sup> : < 59%* 15% NaCl Solution Vapor Transmission < 26%*

1) Dry weight variation after immersion for 1, 3, 7, 14, 21 days.

\* Compared with the unsealed sample

## Other performance

Properties	Result	Reference Standard
Carbonization	Total resistance	UNI 9944
Contact with drinking water	Suitable	D.M. 21.03.73
Resistance to negative pressure	1MPa – ca 14 atm	Sintef
Freeze-thaw cycles resistance	No visible damages after 300 cycles	UNI 7087/72

## Application

Please refer to the material safety datasheet on [www.ecobeton-usa.com](http://www.ecobeton-usa.com). The product should be applied in two coats, on clean surfaces free from residues of oil and grease. It can be applied by spraying, roller or brush. Application by spraying is recommended using low-pressure pumps (max. 5 BAR) normally available for gardening (both manual and electric). On concrete casted in formworks, after having removed the release agent. On old concrete, wet the surface the day before application. Stir the product thoroughly before use. **Ecobeton Vetrofluid®** can also be applied in wet concrete: however, repairs must be carried out first of all in case of water leaks.

## Application on Vertical Surfaces

On vertical surfaces, apply from the bottom upwards. Apply the first coat to saturation without letting the product drip; apply the second coat after the first one has visually dried. The product is cured in 3 - 8 days, however, the surface is ready after a few hours: arty nom hydrophobic coatings (plaster, concrete castings) can be applied after a few hours, even though it is recommended to wait at least 2-3 weeks for treatments that require a completely dry base (paints, resins, etc.).

## Application on underground structures:

Repair all panel holes and gravel nests with a mortar/concrete. Treat the surface with Ecobeton Vetrofluid®. The product is not effective on cast resumptons, which have to be waterproofed with other products (e.g. waterstop). It is possible to cover the treated surfaces with soil after 12 hours and no particular protective measures are necessary.

1. Spray Ecobeton Vetrofluid® on the surface prior to repairs.
2. Apply Ecobeton Vetrofluid® once again when the repair is complete and has dried.

## Concrete Slabs/Roads/Runways/Structures:

Ecobeton Vetrofluid® can be applied to old or new concrete achieving the same results. Ecobeton Vetrofluid® can also be used as a curing compound.

- Existing concrete shall be pressure washed prior to application of Ecobeton Vetrofluid®. Concrete may be damp but cannot be water saturated (wet, surface pooled water, etc) prior to application.
- Application to new concrete, any previously applied sealer or curing compounds must be removed prior to the application of Ecobeton Vetrofluid®.
- Ecobeton Vetrofluid® can be used as a curing compound in place of other curing compound products. Apply after the finishing of newly placed concrete while the surface is still wet.

## Warning

**Temperature:** do not apply below 41°F or above 104°F. Do not apply when rain is forecast within 24 hours.

**Glass and Aluminum:** protect glass and aluminum during application (watches, glasses, etc.) as they can be damaged by the product.

## Coverage rate

The coverage rate per square foot varies depending on the absorption capacity of the surface treated. In general, treat the concrete until saturated but not pooling. This is

Coverage rate varies from 130-200 square foot per gallon of Ecobeton Vetrofluid® for the two light coats.

Note:

The information contained in this sheet is accurate to the best of our current knowledge. The products are guaranteed and have the highest quality and standard with regard to product tolerances. As it is impossible to carry out any controls on the application at the product, no express or implicit guarantee is provided as regards the final result and no responsibility is accepted directly or indirectly by the use of the products. Users are encouraged to carry out tests before application.

**ecobeton®**

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