



# Biblock

**Two-component epoxy curing agent in water dispersion for concrete with consolidating and anti-dust properties**



## WHERE TO USE

- Protection of fresh concrete from the rapid evaporation of water caused by the action of sun and wind, thus reducing the formation of surface cracks.
- Anti-dust and consolidating treatment for cementitious floorings subject to light wheeled traffic.

## Typical applications as an anti-evaporation agent

**Biblock** is particularly suitable for enabling proper curing of concrete for:

- industrial flooring,
- external paving,
- airport runways,
- dams,
- bridges,
- canals,
- reservoirs,
- precast products.

Due to its ability to penetrate into absorbent materials, **Biblock** can be used as a consolidating and anti-dust product.

Its use is also recommended to ensure moisture

retention during curing of expansive anchorage mortars, restoration mortars, etc.

## TECHNICAL CHARACTERISTICS

**Biblock** is a two-component, epoxy impregnation product in water emulsion according to a formula developed in MAPEI Research Laboratories.

After curing, the film gets resistant to the abrasion that can be caused by light-weight traffic, and has optimum adhesion to cement substrates.

When applied to freshly poured concrete, it forms an anti-evaporation barrier, allowing correct hydration even in imperfect conditions such as wind, heat and direct sunlight.

The advantages that derive from the use of **Biblock** are:

- improved development of mechanical resistance; it is an accepted fact that concrete cured without sufficient water can lose more than 50% of its mechanical performance;
- improved resistance to wear;
- less superficial dust;
- reduction of cracking caused by plastic shrinkage;
- elimination of the traditional systems of protection such as, bonding, water, plastic sheets, wet jute sacks, wet sand, etc.;

TECHNICAL DATA (typical values)		
PRODUCT IDENTITY		
	comp A	comp B
Appearance:	viscose liquid	liquid
Colour:	straw yellow	amber
Density (g/cm <sup>3</sup> ):	1.13	1.03
Dry solids content (%):	100	35
Brookfield viscosity (mPa·s):	800 (1 rotor - 5 rpm)	80 (1 rotor - 50 rpm)
APPLICATION DATA (at +23°C and 50% R.H.)		
Ratio of the mix:	component A : component B = 1 : 1	
Brookfield viscosity of the mix (mPa·s):	1200 (5 rotor - 10 rpm)	
Brookfield viscosity of the mix (A+B + 20% H <sub>2</sub> O) (mPa·s):	120 (2 rotor - 10 rpm)	
Density of the mix (A+B) (kg/m <sup>3</sup> ):	1100	
Density of the mix (A+B + 20% H <sub>2</sub> O) (kg/m <sup>3</sup> ):	1060	
Application temperature range:	from +5°C to +35°C	
Open time (workability):	30-40 minutes	
Open time (workability) (A+B + 20% H <sub>2</sub> O):	60-70 minutes	
Final hardening:	12-24 hours	

- quick and easy to use;
- reduced labour costs and more rational management of the construction site.

#### RECOMMENDATIONS

- Do not dilute **Biblock** with solvents.
- Do not apply **Biblock** on friable substrates or those with excessive surface water.
- Do not apply **Biblock** on non absorbent substrates.

Pay particular attention when using pure **Biblock** as an anti-evaporation agent on:

- concrete that will need successive levelling with cement mortars;
- concrete or screeds to be painted;
- substrates that will be covered with ceramics, wood, rubber, etc.

**Biblock** when used pure, forms a vitreous

film that reduces the adhesion of subsequent finishing products.

#### APPLICATION PROCEDURE As an anti-evaporation agent

Generally the application must be carried out on concrete surfaces after the evaporation of any surface bleed water.

In the case of industrial flooring, the coating of **Biblock** must not be applied until the concrete has hardened sufficiently so that it is not damaged during the application. For concrete poured into shuttering, **Biblock** must be applied immediately after the removal of the formwork.

#### Preparing the product and application

The two components of **Biblock** must be mixed immediately before the application. Pour component B into component A and mix until a homogeneous blend is achieved. It is not advisable to use part quantities from the pack as accidental errors in dosage may cause failure or incomplete hardening of the product.

Apply **Biblock** by spray in a single coat, at a pressure of approximately 1 atmosphere, in a thin and uniform layer on the fresh concrete. On hardened shutter formed concrete, apply **Biblock** immediately after the removal of the formwork by spray, brush or roller.

#### **As an anti-dust and consolidating product**

The substrate surface must be perfectly clean before applying **Biblock**.

Crumbly or loose parts, traces of oils and grease or anything else which could inhibit the adhesion of **Biblock** should be completely removed.

#### **Preparing the product and application**

The two components of **Biblock** must be mixed together just before application. Pour component B into component A and mix until uniform.

Then dilute with water, up to a maximum ratio of 20% by weight (according to the degree of permeability of the substrate) and mix thoroughly.

At this dilution **Biblock** assumes fluid characteristics and attains perfect impregnation of the substrate.

**Biblock** can be applied by brush, roller or spray.

#### **Cleaning**

All equipment used for mixing and applying the solution must be cleaned with water immediately after use.

#### **CONSUMPTION**

Approx. 100-150 g/m<sup>2</sup>, depending on the absorption of the substrate.

#### **PACKAGING**

**Biblock** is available in units of 5 kg (comp. A = 2.5 kg; comp. B = 2.5 kg).

#### **STORAGE**

The shelf life of **Biblock** is 24 months if stored in original sealed packaging, protected from frost and from direct sunlight with temperatures between +5°C and +30°C.

#### **SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION**

**Biblock** components A and B may irritate the skin and cause sensitisation if they come into

contact with the skin to those predisposed. **Biblock** component A may irritate the eyes while component B is corrosive and may cause damage to eyes. The product contains low molecular weight epoxy resins that may cause sensitisation if cross-contamination occurs with other epoxy compounds. When applying the product, we recommend the use of protective gloves and goggles and to take the usual precautions for handling chemicals. If the product comes into contact with the eyes or skin, wash immediately with plenty of clean water and seek medical attention. **Biblock** component A is also hazardous for aquatic life. Do not dispose of the product in the environment.

For further and complete information about the safe use of our product please refer to the latest version of our Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

#### **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 website [www.mapei.com](http://www.mapei.com)**

**All relevant references for the product are available upon request and from [www.mapei.com](http://www.mapei.com)**



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