

Cormix® H₂O Stop

LIQUID AND POWDER FORM INTEGRAL WATERPROOFING ADMIXTURE BY CRYSTALLIZATION

DESCRIPTION

A high grade easy to handle integral waterproofing admixture for both waterproofing and concrete corrosion protection using unique nanotechnology to chemically modify the cement matrix by reacting with the cement paste to reduce pore & capillary size. The reaction between **Cormix H₂O Stop** and cement paste produces a non-soluble crystalline structure throughout the pores & capillaries permanently sealing the concrete. **Cormix H₂O Stop** is available in two forms liquid or powder.

USES & ADVANTAGES

Uses include for all types of waterproofing and concrete corrosion protection in basements, water tanks, reservoirs, dams, waste water plants, swimming pools, water treatment plants, tunnels, marine structures, concrete highways etc.

Advantages include:-

- Seals micro cracks. Can seal hairline cracks up to 0.5 mm.
- Concrete waterproofed throughout.
- Improved durability. Increases concrete strength
- Protection against Chloride and sulphate ingress.
- Withstands hydrostatic pressure.
- Improves chemical and carbonation resistance.
- Fast tracks construction.
- No installation costs, seams or joints.
- Does not rely on bond to work.
- Permanent waterproofing.
- Integral waterproofer.
- Non toxic. No V.O.Cs.
- Reduces opportunity for freeze thaw damage.
- Improves workability and strength.
- May reduce existing admixture dosage.
- No costly surface preparation.
- Added to concrete not constrained by weather conditions.
- Liquid form does not clump as powders and easy to dose.
- Enhances hydration process.
- Environmentally friendly.

PROPERTIES

	<u>Liquid</u>	<u>Powder</u>
Appearance :	Liquid	Powder
Colour:	Transparent	Grey Powder
pH :	13-14	13-14
Specific Gravity :	Approx. 1.21-1.23	-
Chloride Content :	Nil	Nil
DIN EN 480-10		
Bulk Density :	-	1.25-1.35

APPLICATION

Cormix H₂O Stop - Liquid

Cormix H₂O Stop is added to the concrete at the time of batching at dosages of 0.8 - 1 litre per 100 kg of total cementitious material by automatic dispensers.

Under certain conditions the dosage used may be 2-3 litre per 100 kg of total cementitious material to meet the specific requirements of a project. For the optimum dosage consult Cormix.

Cormix H₂O Stop - Powder

Cormix H₂O Stop powder should be dosed at of 0.8-1 kg per 100 kg of total cementitious material. As a guide line the following should be followed :

Central mixing operation :-

Mix the **Cormix H₂O Stop** powder with water to form a flowing slurry 25 kg of powder to 7.5-8 kg of water. Pour the mixture into the ready mix lorry. Mix the concrete as normal in the plant reducing the water content to account for that mixed with **Cormix H₂O Stop** pour the concrete into the lorry & mix for at least 5 minutes to ensure good distribution of **Cormix H₂O Stop**.

Dry batch ready mix concrete operations :-

Add the required quantity of **Cormix H₂O Stop** in powder form to the ready mix lorry. Drive the R.M.C lorry under the batch plant & add 60% of the water with 150-250 kg of aggregate mix for 2-3 minutes to ensure good distribution of **Cormix H₂O Stop**. Add the remaining materials to the lorry as normal practice.

Precast concrete plants :-

Add the **Cormix H₂O Stop** to the aggregate and sand mix for 3 minutes before adding cement & water.

NOTES: Good dispersion of the admixture is important to get a homogeneous mix. Therefore do not add **Cormix H₂O Stop** powder directly to wet concrete as this may result in clumping & poor dispersion.

Under certain conditions the dosage used may be 2-3 kg per 100 kg of total cementitious material to meet the specific requirements of a project. For the optimum dosage consult Cormix.

Note : **Cormix H₂O Stop** should be tested in trial mixes to determine the optimum dosage and any necessary changes to existing additive dosages. Do not use without checking workability, slump retention and retardation in advance. Agitate before use the liquid version.

OVERDOSING

Overdosing of **Cormix H₂O Stop** will result in increased workability and possibly more rapid set. In the case of accidental overdosing check strengths and setting times before stripping forms.

Overdosing normally will have no detrimental long term side effects as long as cured correctly with water before stripping forms. In general 28 day strengths would be improved. If in doubt contact Cormix Technical Department.

STANDARDS

- Compressive strengths at 28 days according to ASTM C 39 showed strength more then control.
- Chloride diffusion is reduced significantly when measured according to ASTM C1202
- Cormix H₂O Stop complies to EN 934-2

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- Cormix H₂O Stop when used on Concrete is suitable for Potable Water Contact : BS 6920 -1-2000.
- Cormix H₂O Stop is capable of Self-Healing of Cracks upto a Width of 0.5 mm.
- Comply to JIS A 1404 : Depth of Water penetration - Less than Control.
- Comply to BS 1881-P122 : Water Absorption - Less than Control.
- Air Content : Test mix \leq 2% by volume above control according to BSEN 12350-7 : 2009 and BSEN 12350-1 : 2009.
- Compressive Strength : Test mix \geq 85% of control according to BSEN 12350-7 : 2009 and BSEN 12390-3 : 2009.
- Capillary absorption :
Test mix \leq 50% by mass of control (7 days)
Test mix \leq 60% by mass of control (90 days)
According to BSEN 480-5 : 2005 and BSEN 480-1/BSEN 196-1.
- Water soluble chloride : \leq 0.1% by weight complies to BSEN 480-10 : 1997.
- Total chloride content : \leq 0.1 % by weight complies to ISO 1158 : 1998.
- Alkali content : $<$ 3% by weight (powder) and $<$ 15 % by weight (liquid) complies to BSEN 480-12 : 1998
- Silica content : $<$ 50% by weight (powder) and $<$ 1% by weight (liquid) complies to BSEN 196-2.
- Dry material content : $>$ 95% by weight (powder) and $>$ 30 \pm 5 % by weight (liquid) complies to BSEN 480-8 : 2012.
- Density : 1.21-1.23 kg/litre (liquid) complies to BS 4522 :1988.
- pH : 13-14 complies to ISO 4316 : 1977
- Complies to (WRAS) water regulations advisory scheme specification according to BS6920-Part 1 :2014
- Complies REACH requirements as per article 33 (1) of the REACH REGULATION (EC 1907/2006).

PACKAGING

Cormix H₂O Stop (Liquid) is available in 25 ltr Pail & 200 ltr drum.

Cormix H₂O Stop (Powder) is available in 25 kg paper bags or 25 kg plastic pails.

STORAGE & SHELF LIFE

The product must be stored shaded at a minimum temperature of 45°F (7°C). Shelf life is one year when stored under proper conditions in original unopened packaging. Agitate the liquid form before use and protect from freezing.

HEALTH & SAFETY

Cormix H₂O Stop is highly alkaline. Protect hands with rubber gloves and wear safety goggles during mixing & application. Avoid contact with skin or eyes. Should contact occur, flush copiously with water. If irritation persists, contact a physician.

TECHNICAL SERVICE

Technical assistance including mix design preparation and supervision on site during incorporation of **Cormix H₂O Stop** is available by contacting Cormix International Limited.

QUALITY ASSURANCE

ISO 9001 : 2015 verified by TUV Nord.
ISO 14001 : 2015 verified by Lloyd's Register International



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EN 934-2

Water Resisting Admixtures

Capillary absorption:	
7 days curing:	\leq 50 %
90 days curing:	\leq 60 %
Compressive Strength:	\geq 85 %
	28 days
Air Content in fresh concrete:	\leq 2 %

DISCLAIMER

Performance data is achieved testing in accordance with International Standards. Testing by others may result in different results from those published as a result of external factors such as poor sampling, incorrect mixing, varying temperatures, curing, crushing procedures etc.

Cormix does not take responsibility nor need to defend others testing that does not achieve the published data. The user must test the products suitability for the intended application and purpose. Cormix reserves the right to change the properties of the product. Site conditions and differences in materials are such that no warranty or fitness for a particular purpose, nor liability can be inferred from the published data sheet, written recommendations or from other advise offered.

CONTACT DETAILS

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