

EXOLINE® AQUA STOP C+

Waterproofing and frost-resistant concrete admixture



TECHNICAL DATA SHEET

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EU AUTHORISED REPRESENTATIVE:

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BASIC PRODUCT DATA:

Customs tariff code: 3824 40 00

Standard: EN 934-2 – Admixtures for concrete and mortar

Pack size: 1.6 kg

Shelf life: 36 months

1. PRODUCT DESCRIPTION

Exoline® Aqua Stop C+ is a **hydrophobic, pore-blocking concrete admixture based on ExoBase™ technology** that increases the watertightness and durability of cement-based concrete. It reduces the concrete's water absorption and increases the structure's resistance to moisture, ammonia and other chemical loads.

The pore-blocking effect reduces the ingress of water and aggressive substances into the concrete, thus **helping to protect the reinforcing steel against corrosion** and extending the service life of the structure.

Exoline® Aqua Stop C+ is suitable for the construction or refurbishment of **exterior and interior concrete surfaces, screeds, industrial floors and load-bearing concrete layers**. The admixture is easy to place and makes it possible to create **high-strength, watertight and abrasion-resistant concrete surfaces**.

2. PRODUCT IDENTIFICATION

Product name	Exoline® Aqua Stop C+
Product type	Hydrophobic concrete admixture
Format	Powder-form dry concrete mix (one-component)
Customs tariff code (HS)	3824 40 00
Harmonised standard	EN 934-2 - Concrete admixtures MSZ EN 206:2013+A2:2021 - Concrete (field of application; exposure classes e.g. XF4, XA1)
Fire class	A1 (non-combustible)
EAN	5060421900104

3. TECHNICAL DATA (MSZ EN 206:2013+A2:2021)

Physical state	Powder (dry concrete mix)
Colour	Grey
Components	One-component
Fire class	A1
Dosage	5 - 7 % by weight of cement, depending on the fine-particle content of the concrete and on the required watertightness.
Mixing	Homogenised with the dry components in a concrete mixer

4. TECHNICAL DATA FOR CONCRETE PRODUCED WITH THE ADMIXTURE

The technical performance of the finished **CONCRETE** depends on the mix design used, on the raw materials and on the site conditions.

Capillary water absorption (W)	0.1 kg/(m ² ·min ^{0.5})
Vapour diffusion resistance factor	$\mu \approx 80-120$
Air content	$\approx 4 - 6 \text{ vol\%}$
Water penetration	Depth of water penetration: 10 - 15 mm. Requirement of class XV3(H): $\leq 20 \text{ mm}$ (MSZ 4798:2016)
Frost resistance	XF4 - EN 206
Min. layer thickness	$\geq 50 \text{ mm}$
Material consumption	$\approx 20 - 22 \text{ kg/m}^2/\text{cm}$
Working time	$\approx 40 \text{ minutes}$ (at 20 °C)
Mixing	Low-speed concrete mixer, max. 600 rpm, min. 5 minutes

5. COMPOSITION AND DECLARATION

Exoline® Aqua Stop C+ is a **hydrophobic, pore-blocking concrete admixture based on ExoBase™ technology** that increases the watertightness and durability of cement-based concrete mixes. The main active component of the product is: **ExoBase™ hydrophobic active agent** - for densifying the pore structure of the concrete and reducing water absorption.

Exoline® Aqua Stop C+ contains no asbestos, formaldehyde, VOC or other volatile organic solvents. The product is **REACH compliant**, non-radioactive and, in set concrete, **not hazardous to the environment**. The hardened material becomes part of the concrete structure and, in accordance with local regulations, **may be handled as normal construction waste**.

6. FIELD OF APPLICATION AND BENEFITS

SELECTED FIELDS OF APPLICATION

- For producing screeds and blinding concrete
- For creating cellar floors and concrete surfaces exposed to ground moisture
- For producing industrial floors and heavy-duty concrete surfaces
- For creating underfloor-heating screeds
- For producing pavements, steps and paved concrete areas
- For concreting formwork-block and pillar concrete structures
- For creating watertight concrete layers
- For refurbishing worn or damaged concrete surfaces (from $\geq 20 \text{ mm}$ layer thickness)
- For structural concrete (from $\geq 50 \text{ mm}$ layer thickness)
- For increasing the durability of reinforced concrete structures

NOTE: The use of **Exoline® Aqua Stop C+** reduces the water absorption of the concrete, while the durability and watertightness of the structure improve.

OTHER APPLICATIONS

- Production of underfloor-heating screeds
- Creation of smaller monolithic concrete surfaces
- Exterior concrete surfaces (e.g. garden paths, yard concrete surfaces)
- Repair or reinforcement of concrete surfaces in areas exposed to water loads

KEY BENEFITS

- **ExoBase™ technology** - reduced capillary water absorption and pore-blocking effect
- **Improved watertightness** - the water penetration of concrete produced with the admixture is reduced
- **Contributes to the protection of the reinforcing steel against corrosion**
- **Increases the durability of concrete in aggressive environments**
- **Resistant to ammonia, acid and alkali loads**
- **Suitable for both manual and machine concrete mixing**

7. SURFACE PREPARATION AND APPLICATION

The dosage of **Exoline® Aqua Stop C+** must be determined on the basis of the **fine-particle content and particle size distribution of the concrete and the required watertightness**.

CONCRETE GRADE	FINE PARTICLE DISTRIBUTION	COARSER PARTICLE DISTRIBUTION
C8/10 - C16/20	~ 8 - 9 kg	~ 5 - 6 kg
C20/25 - C25/30	~ 6 - 8 kg	~ 4 - 6 kg
C30/37 - C35/45+	~ 5 - 6 kg	~ 3 - 4 kg
Special concretes	Only after laboratory validation, max. ~ 2 - 3 kg	

Note: The mix design applies to **fine-grained (0 - 4 mm) concrete mixes**. The actual composition may be modified depending on the particle size distribution of the aggregate used, the concrete grade and the required watertightness. The dosage of **Exoline® Aqua Stop C+** must always be matched to the **fine-particle content of the concrete**, although the product can be used with any aggregate with a fraction starting from 0 (e.g. 0/16, 0/22 or 0/32 mm gravel).

Note: The values given are reference values, determined on the basis of the standards (MSZ EN 206:2013+A2:2021 and EN 934-2 – Concrete admixtures) and of the manufacturer's tests. Actual values may vary from batch to batch within the limits of quality-control tolerances. Sulphate (ASTM C88), acid and alkali resistance are verified by the manufacturer's tests.

SURFACE PREPARATION

- The substrate must be sound, level, load-bearing, free of shrinkage, free of cracks, clean and free of dust, tar, oil and wax. There must be no bond-inhibiting residues on it.
- The surface of old concrete must be cleaned. Loose, crumbling material must be chiselled back to sound concrete. The remaining sound concrete must be roughened and washed down. Old coatings that are not firmly bonded must be removed.
- Movement joints must be formed in accordance with the applicable construction standards.
- Depending on the absorbency of the substrate, use a deep-penetrating primer.

Mixing and placing

EXOLINE® RECOMMENDED CONCRETE MIX DESIGN

Exoline® Aqua Stop C+	Portland cement	Gravel
1 pc / 1.6 kg	25 kg	110 kg (0/4mm)
After mixing: 137 kg ~ 0.07 m³ ~ 11 m² / 1 cm - finished concrete		

Mixing instructions: I.

First: Mix the **25 kg cement** and the contents of the **1.6 kg Exoline® Aqua Stop C+** plastic bucket in a mixing trough or concrete mixer **"DRY"** until homogeneous. (In winter the recommended cement grade is 42.5/II composite, in summer 32.5/II composite, to ensure appropriate quality)

Then, taking the quality into account:

Second: Mix 1 volume (shovel) of cement blended with the **Exoline®** admixture and (as required) 3 - 4 volumes (shovels) of "general-purpose" sand (clay- and silt-free, obtainable from builders' merchants and quarries), repeating the dosing in the normal way, **"DRY"** for approx. 3 - 6 minutes depending on the quality of the concrete mixer, until homogeneous. To achieve excellent quality, use dried, graded sand with a particle size of 0/4 mm.

Third: After dry mixing, mix the concrete with the amount of water used in the normal procedure (approx. 5 - 6 litres) for at least 3 - 6 minutes until free of lumps.

Mixing instructions: II. As recommended by Exoline®:

Exoline® Aqua Stop C+ Blended into 25 kg bagged screed concrete from any manufacturer.

1 pc / 1.6 kg

4 x 25 kg

After mixing: 100 kg $\approx$ 0.05 m³ / 11 m² / 1 cm - finished concrete

First: Add the **Exoline® Aqua Stop C+** admixture to any commercially available 25 kg base concrete. (The contents of the 1.6 kg plastic bucket can be dosed into 4 x 25 kg bagged products.)

Second: Mix the components **"DRY"** for 3 - 6 minutes until homogeneous.

Third: After dry mixing, mix the concrete with the amount of water used in the normal procedure (approx. 5 - 6 litres) for at least 3 - 6 minutes until free of lumps.

PLACING

- Mix the contents of the bucket **"DRY"** with the gravel and the cement (for 3 - 4 minutes), then gradually add the appropriate amount of water.
- When repairing old, dusting concrete, apply a thin layer of deep-penetrating primer and a bonding bridge to the cleaned surface, which promotes adhesion between the two surfaces.
- Only as much material may be mixed as can be used within the working time of approx. 40 minutes.
- The material can be placed with conventional masonry tools. Cleanliness must be observed during application; no foreign contaminants (cigarette ends, matches, mud, etc.) may enter the material.

Mixing: Mix for at least 5 minutes in a low-speed concrete mixer until homogeneous; tilt the drum to 35°.

AFTER-CARE AND PROTECTION

- At temperatures above +25 °C, keep damp by spraying with water for at least 3 - 5 days
- Must be protected from: direct sunlight, draughts, frost and driving rain
- Application temperature range for fresh concrete: +5 °C ... +25 °C

8. HEALTH, SAFETY AND ENVIRONMENT

Product name	Exoline® Aqua Stop C+
CLP classification	Skin Irrit. 2 (H315), Eye Dam. 1 (H318)
Hazard statements	H315: Causes skin irritation H318: Causes serious eye damage
Precautionary statements	P260, P280, P305+P351+P338, P302+P352
VOC content	<1 g/l (in powder form: 0)
REACH compliance	Yes (Regulation (EC) No 1907/2006)
SDS availability	exoline@exoline.co.uk / manufacturer's safety data sheet

Exoline® Aqua Stop C+ contains cement. On contact with water, cement forms an alkaline (pH > 12) solution which may cause skin and eye irritation. Classification according to the EU CLP Regulation (EC) No 1272/2008:

MANDATORY PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Protective gloves - nitrile or neoprene gloves to EN ISO 374
- Eye protection - closed safety goggles to EN 166
- Dust mask - FFP2 category (EN 149)

ENVIRONMENTAL REQUIREMENTS

- The set material is neutral, non-hazardous waste - it may be handled as normal construction waste
- Liquid residues must not be discharged into drains or surface waters
- Waste management: EWC 17 01 01 (concrete) - in accordance with local regulations

9. STORAGE, TRANSPORT AND PACKAGING

Pack sizes	1.6 kg bucket / plastic bag
Storage conditions	In a dry place protected from the weather, between 5-35 °C
Shelf life	12 months in unopened packaging
Transport classification	Non-hazardous goods (for ADR/RID purposes)

10. EU CONFORMITY AND APPLICABLE STANDARDS

Relevant standards	EN 934-2 - Concrete admixtures MSZ EN 206:2013+A2:2021 - Concrete
REACH compliance	Ensured in accordance with Regulation (EC) No 1907/2006.
CLP Regulation	(EC) No 1272/2008 - classification, packaging and labelling.
Biocides (BPR)	Not relevant - the product contains no biocidal active substance.
RoHS	Not relevant - not an electrical/electronic product

CE marking: Exoline® Aqua Stop C+ concrete admixture is a construction product covered by **harmonised standard EN 934-2**. The product may be placed on the market with CE marking under **Regulation (EU) No 305/2011 (CPR)** on the basis of the issued **Declaration of Performance**.

11. LEGAL DISCLAIMER AND LIABILITY

This Technical Data Sheet is based on the current technical knowledge and experience of **Exoline Ltd.** The data derive from tests carried out under laboratory conditions. Actual performance may depend on the conditions of application, on the substrate and on the quality of preparation.

Exoline Ltd. accepts no liability for damage resulting from improper use or from application not carried out in accordance with the instructions. Correct application, compliance with the instructions and conformity with local building regulations are the responsibility of the user.

This Technical Data Sheet may be copied and attached to other project documents; the document so created may not, however, modify or replace the requirements of the Technical Data Sheet valid at the time of use of the **Exoline®** product.

The manufacturer reserves the right to modify the technical data, the composition and the product specifications without prior notice. Always use the current, valid data sheet.

The latest version is available at www.exoline.co.uk.

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