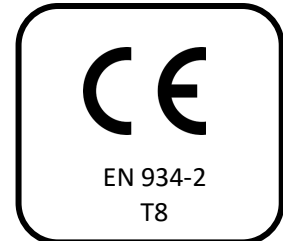




Technical data sheet (TDS)

Concretum® Q-FLASH ret (L)

Retarder for rapid-hardening
concrete Concretum® Q-FLASH 2/20



1. Description

1.1. Product

Concretum® Q-FLASH ret (L) is a retarder, conforming to EN 934-2, specially developed for the Concretum® Q-FLASH 2/20 rapid-hardening concrete. By using Concretum® Q-FLASH ret (L) the setting of the rapid-hardening cement Concretum® Q-FLASH cem 100 (P) can be retarded. In combination with Concretum® Q-FLASH cem 100 (P) rapid-hardening cement, Concretum® Q-FLASH sp (L) superplasticizer, aggregate and water it allows the production of a rapid-hardening concrete as in-situ concrete or as ready mixed concrete in stationary or mobile concrete plants.

2. Product properties

Concretum® Q-FLASH ret (L) retarder has the following properties:

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| Effect: | Concretum® Q-FLASH ret (L) retards the setting of the rapid-hardening cement Concretum® Q-FLASH cem 100 (P). In combination with Concretum® Q-FLASH cem 100 (P) rapid-hardening cement and with the superplasticiser Concretum® Q-FLASH sp (L), Concretum® Q-FLASH ret (L) creates an extremely rapid hardening and fast drying concrete with a low shrinkage deformation and low heat of hydration. |
| Colour/Consistency: | Colourless liquid |
| Shelf life: | If stored according to the storage conditions, 12 months from production date. |
| Storage conditions: | In unopened original packaging without direct sunlight between +5 and +30 °C. |
| Chemical basis: | Aqueous solution of carboxylic acid |

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| Density: | 1.20 – 1.24 g/cm ³ |
| pH value: | 0.5 – 2.5 |
| Alkali content (EN 480-12) | ≤ 0.5 M-% (Na ₂ O equivalent) |
| Consistency: | Homogeneous |
| Usual solids content (EN 480-8): | 48 +/- 2 M-% |
| Viscosity (ISO 2431): | 10 to 50 mPa s at 20 °C |
| Water-soluble chloride content (EN 480-10): | ≤ 0.1 M-% |

3. Terms of delivery and use

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| Delivery: | 10 kg canister or 1000 kg IBC container |
| Shelf life: | If stored according to the storage conditions, 6 months from production date. |
| Storage conditions: | Store in the closed canister/IBC container protected from the weather and out of direct sunlight. |
| Concrete recipe: | Unless otherwise stated, the usual rules for the design of mixtures for the production of concrete formulations shall apply. |
| Dosage: | The retarder must be dosed correctly in order for the rapid-hardening concrete to have the desired open-time. The recommended dose rates are 0.5 – 2.0 % (of cement weight). Other dose rates are possible subject to trials. |

4. Special considerations

Concretum Construction Science AG as the supplier of the retarder is only responsible for its properties. The concrete manufacturer (either a ready-mix concrete company or a construction company with its own concrete mixing plant/mobile batching truck) is responsible for the quality of the rapid-hardening concrete produced with the retarder.

The production and processing of Concretum® Q-FLASH ret (L) are always subject to the general rules of good concrete production according to the relevant standards and other regulations with regard to the measures to ensure optimal processing and post-treatment of concrete.

5. Measurement values

All measurement values stated in this technical datasheet are based on internal laboratory tests by Concretum Construction Science AG. The effective values may deviate from the stated measurement values due to external circumstances which Concretum Construction Science AG cannot control.

6. Country-specific data

The data and measurement values of the Concretum Construction Science AG products may vary depending on the country of use. The respective local technical data sheets apply. Upon request, Concretum Construction Science AG will provide information about which data and measurement values apply in the individual countries.

7. Important safety information

When using the retarder Concretum® Q-FLASH ret (L) in this data sheet, the same recommendations apply in respect of handling and personal safety equipment as for standard admixtures.

In particular, the following is emphasised here:

- The admixture Concretum® Q-FLASH ret (L) is an acid and requires safety goggles, gloves and long clothing (no bare skin) to be worn.

For detailed information, please consult the current safety data sheets for Concretum® Q-FLASH ret (L) at www.concretum.com.

8. Documentation of defects

Concretum Construction Science AG products have the specific properties conclusively named in this technical data sheet.

To safeguard the quality of the product properties, Concretum Construction Science AG retains a sample batch of each production batch for a period of 24 months.

If Concretum Construction Science AG products are reported by a client as defective, the product properties are checked exclusively by testing the corresponding batch sample using an internal testing procedure.

9. Legal information

This datasheet forms a component of any contract between Concretum Construction Science AG and the customer. The product properties are described in full in the section 'Components and their properties'. The products must be used according to the provisions of Concretum Construction Science AG and this datasheet.

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