



Technical data sheet (TDS)

Concretum® Q-FLASH cem 100 (P)

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

certification
pending

1. Description

1.1. Product

Concretum® Q-FLASH cem 100 (P) is a rapid-hardening cement from which the rapid-hardening concrete Concretum® Q-FLASH 2/20 is made together with the superplasticizer Concretum® Q-FLASH sp (L), the retarder Concretum® Q-FLASH ret (L), aggregate and water. The rapid-hardening concrete can be produced as in-situ or ready-mixed concrete in stationary or mobile concrete mixing plants. The rapid-hardening concrete Concretum® Q-FLASH 2/20 exhibits extremely rapid strength development, fast drying and low shrinkage as well as low heat of hydration.

2. Product properties

Concretum® Q-FLASH cem 100 (P) rapid-hardening cement has the following properties:

Effect:	Concretum® Q-FLASH cem 100 (P) in combination with Concretum® Q-FLASH sp (L) superplasticiser and Concretum® Q-FLASH ret (L) retarder creates an extremely rapid hardening and fast drying concrete with a low shrinkage deformation and low heat of hydration.
Colour/Consistency:	grey powder
Chemical basis:	fully mineral hydraulic binder
Uniformity:	homogeneous
Bulk density:	Approx. 1.2 – 1.9 g/cm ³
Density:	Approx. 2.8 g/cm ³
Water-soluble chloride content: (EN 480-10):	≤ 0.1 M-%

Superplasticizer:	compatible only with Concretum® Q-FLASH sp (L) superplasticizer ²
Retarder:	compatible only with Concretum® Q-FLASH ret (L) retarder ²
Air entrainment agent:	compatible with selected air entrainment agents ³
Heat of hydration:	low heat of hydration (229 J/g over the first 41h)
Strength development:	Concrete produced using Q-FLASH cem 100 (P) starts developing strength rapidly upon setting. Compressive strength in excess of 40 N/mm ² can already be achieved at ages of only 2 hours. ²

¹ The specification refers to the concrete and is valid at a fresh concrete temperature of about 20°C. If a longer open time is required, the concrete can be delayed with Concretum® Q-FLASH ret (L). The values are only indicative values.

² It is recommended to carry out trial mixes to determine the optimum concrete recipe. Please contact your distributor for detailed information and technical support. The values are only indicative values.

³ Only after previous evaluation by Concretum Construction Science AG technical support.

3. Terms of delivery and use

Delivery:	1000 kg big bags or 25 t bulk
Shelf life:	If stored according to the storage conditions, 6 months from production date.
Storage conditions:	Store dry and protected from the weather either in a closed cement silo or in the big bags with additional protection coverage (plastic covers or equivalent). Residue-free cleaning of the silo must be ensured before and after use of the product.
Concrete recipe:	Unless otherwise stated, the usual rules for the design of mixtures for the production of concrete formulations shall apply.
Cement content:	The cement content must be chosen in consultation with Concretum Construction Science AG technical support and is usually between 360 and 450 kg/m ³ .
Water/cement ratio:	The water-cement mixture ratio must be kept as low as possible and may not exceed 0.36.

4. Special considerations

Concretum Construction Science AG as the supplier of the rapid-hardening cement 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 rapid-hardening cement.

The production and processing of Concretum® Q-FLASH cem 100 (P) 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 datasheets 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 working with Concretum® Q-FLASH cem 100 (P), the same recommendations as for cement apply with regard to handling and personal safety equipment. The powder is an alkali and an irritant. For detailed information, please consult the current safety datasheet at www.concretum.com.

8. Documentation of defects

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

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 conclusively in the above section 'Other properties'. The products must be used according to the provisions of Concretum Construction Science AG and this datasheet.

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