

Technical Data Sheet Concretum Q-FLASH 2h cem (P)

A) Description

Product:

Concretum® Q-FLASH 2h cem (P) is a multi functional cement in powder form for concrete production. It causes an extremely fast hardening and drying of concrete. It also reduces shrinkage. Heat of hydration remains moderate.

Concretum® Q-FLASH 2h cem (P) is used together with Concretum® Q-FLASH 2h ret (L) to produce the rapid-hardening concrete Concretum® Q-FLASH 2/20.

Application:

Concretum® Q-FLASH 2h cem (P) is used for the production of durable concretes with extremely fast hardening and drying. Typical examples for applications are replacements and repairs of concrete slabs of airport runways and taxiways.

Concretum® Q-FLASH 2h cem (P) can be used as an additive to produce concretes in plants on and off site. See also product information on Concretum® Q-FLASH 2/20.

Advantages:

Concretum® Q-FLASH 2h cem (P) is used to produce Concretum® Q-FLASH 2/20. Despite the rapid hardening, the workability of Concretum® Q-FLASH 2h remains good for 45 - 75 minutes. It features low risk of cracking and high durability. In spite of a severe reduction of the required amount of water, a good workability is maintained.

B) Product data

Function:

Concretum® Q-FLASH 2h cem (P) provides a concrete with extremely fast hardening and drying as well as low shrinkage and low heat of hydration.

Color:

Grey powder.

Packaging:

Big-bags of 1'000 kg, bulk delivery of 24 t (silo).

Shelf life:

Six months from production if stored properly.

Storage:

In unopen original packaging under dry conditions.

Important: After using the product in a bulk container for cementitious products (e.g. cement silo) the container has to be cleaned well. If normal cements are contaminated by Concretum® Q-FLASH 2h cem (P), uncontrollable problems of hardening may occur. These problems can also be caused by only very small amounts of the product remaining inside silos or similar bulk containers after incomplete cleaning.

Chemical basis:

Combination of dry additives and hydraulic binders.



Uniformity:
homogeneous

Bulk density:
0.9 kg/l

Content of water-soluble chlorides:
< 0.1 M-%

C) Operating instructions

Application:

The use of Concretum® Q-FLASH 2h cem (P) is solely permitted for the production of Concretum® Q-FLASH 2/20, in combination with Concretum® Q-FLASH 2h ret (L). It is recommended to define the concrete mix design in cooperation with Concretum AG by a set-up of the concrete plant. This set-up usually consists of preliminary concrete tests to check relevant properties of fresh and hardened concrete. The compatibility between local raw materials such as cement and aggregates and Concretum® Q-FLASH 2h cem (P) is tested also.

Dosage:

The dosage is defined by Concretum AG for every concrete plant during the set-up process. The average dosage is 400-500 kg/m³. In particular cases the dosage defined by Concretum AG shall be authoritative.

Mixing:

Concretum® Q-FLASH 2h cem (P) is added to aggregates before adding water. In a second step Concretum® Q-FLASH 2h ret (L) are added to the mixing water or added to the mixer together with the water. To fully exploit the high water reduction a wet mixing time of 180 - 240 seconds is recommended. To prevent excess water it is recommended to start the additional water dosage (on top of the main water) not before 2/3 of the wet mixing time.

Concretum® Q-FLASH 2/20 made with Concretum® Q-FLASH 2h cem (P) can be produced directly in a truck mixer. However, an individual treatment considering the circumstances is necessary. Please contact us for details.

Additional information:

As long as there are no other regulations in this data sheet, the general rules of good practice in concrete production have to be followed. In addition all measures on optimal processing and curing of concrete according to standard SIA 262 have to be taken.

Compatibility:

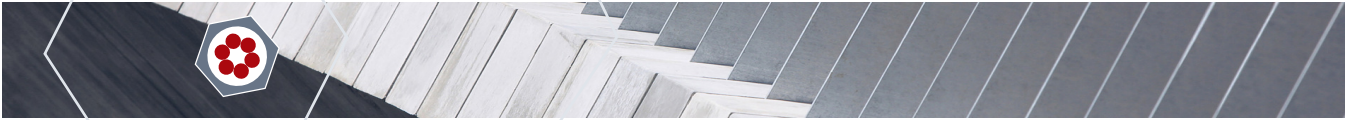
A combination of Concretum® Q-FLASH 2h cem (P) with other additives such as air-entraining agents and retarders will be individually tested during the preliminary set-up process. After successful testing possible combinations are approved by Concretum AG.

D) Data

All data published in this technical data sheet is based on internal laboratory tests of Concretum AG. Real values may vary due to external factors that cannot be affected by Concretum AG.

E) Country specific data

Data and values on products of Concretum AG may vary depending on the country of application. The



corresponding local technical data sheets are valid. In the case of doubt Concretum AG provides information on valid data and values for the country in question.



F) Important safety information

For detailed safety information it is recommended to seek advice in the current material safety data sheet on www.concretum.com.

G) Proof of defects

Products of Concretum AG feature the specific properties that are completely described in this data sheet. For quality control purposes Concretum AG retains samples of each production batch for a period of 24 months. If products of Concretum AG are censured as defective by a customer, a verification of this statement is done solely by checking the corresponding batch sample by an internal testing procedure.

H) Legal information

This data sheet is part of a possible contract between Concretum AG and the customer. The properties of the products are completely described in section B. An application of the products has to be done according to both, the instruction of Concretum AG and this data sheet.

Version January 12th, 2010