



## Product Information Concretum® Q-FLASH 2/20

### Rapid-Hardening Concrete

#### Description

Concretum® Q-FLASH 2/20 is a rapid-hardening concrete. It is ready for reloading only two hours after mixing. Furthermore, Concretum® Q-FLASH 2/20 dries very fast which accelerates the construction process.

#### Applications

- All sorts of rapid-hardening concrete applications.
- In general for casting concrete structures that dry extremely fast.
- Replacement or maintenance of carriageway slabs of airport runways and aircraft stands.
- Repair and casting of concrete carriageways with very short off-times.
- Maintenance of concrete roads and concrete pavements.
- Replacement and maintenance of solid railway basements.
- Production of precast concrete elements with short stripping times.

#### Material properties

- Concretum® Q-FLASH 2/20 enables the production of concrete elements which feature a compressive strength  $f_c$  of at least 20 N/mm<sup>2</sup> about two hours after concrete mixing.
- After 6 hours Concretum® Q-FLASH 2/20 arrives at a moisture content of 4.0 CM-%. This allows continuing working (e.g. application of waterproofing on bridges or building of floorings).
- Depending on temperature and water content, the workability of Concretum® Q-FLASH 2/20 is good for 45 to 75 minutes after concrete mixing.
- Concretum® Q-FLASH 2/20 features low shrinkage ( $\epsilon_{cs}(t = \infty)$  max. 0.3 ‰) and low heat of hydration. Therefore, construction units made of Concretum® Q-FLASH 2/20 show low risk of cracking and are immensely durable.
- Depending on the application, Concretum® Q-FLASH 2/20 can be reinforced by Concretum® SUPERFIBER and SUPERFIBER H. Please take notice of the product information on SUPERFIBER 40/8 and SUPERFIBER H.



## Norm classifications

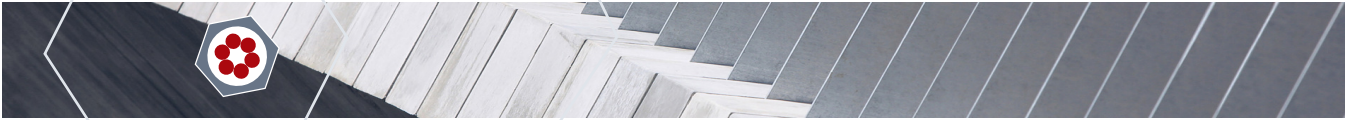
The standard SN EN 206-1: Concrete – Part 1 doesn't consider rapid-hardening binders. Therefore, Concretum® Q-FLASH 2/20 is not classified as a norm type of concrete. Nevertheless, Concretum® Q-FLASH 2/20 meets all requirements:

Class of strength	at least C40/50
Classes of expositions	to XC4, XD3, XF4 (depending on the application)
Maximum size of aggregate	D <sub>max</sub> = 8 bis 32 mm (depending on the application)
Class of consistence	C2 oder C3 (depending on the application)
Class of Chloride concentration	CI 0.20
W/Z-value	max. 0.36 (depending on the application)
Water supply capacity (SIA 262/1 Anh. A)	q <sub>w</sub> max. 10 g/(m <sup>2</sup> h)
Chloride resistance (SIA 262/1 Anh. B)	DCI max. 10·10 <sup>-12</sup> m <sup>2</sup> /s
Frost and de-icing salt resistance (SIA 262/1 Anh. C)	medium to high (depending on application and production)

## Working information

- Like traditional concrete, Concretum® Q-FLASH 2/20 is distributed in a truck mixer from the ready-mix plant or produced in a building site plant. For security reasons and to save time, the concrete is transported in a dumper truck. At remote building sites where no concrete plant is nearby, Q-FLASH 2/20 can be produced directly in a truck mixer as well.
- Depending on temperature and added amount of water, the processing time is 45 - 75 minutes. After that the hardening begins. Transport, installation, compaction and curing have to be adjusted to these time limits.
- No addition of water or additives on the building site!
- Temperature of fresh concrete at the installation: 15 to 25 °C.
- It is necessary to work the surface and begin the curing immediately after the installation. This must be carried out step by step!
- For the compaction apply the same regulations as for the installation of traditional high-quality concretes.
- Striking time: at least 2 hours.
- Deviations from the declared hardening times, strength development, processing times and drying periods are possible, depending on the circumstances. It is recommended to make a test in advance.
- Curing: The application of a liquid sealing compound (white pigmented) directly after the installation (free surfaces) or directly after the striking (stripped surfaces) is recommended depending on the building material. If the following layers won't allow the application of a sealing compound it is possible to alternatively cover with polythene sheets. Free surfaces have to be additionally covered with thermo mats. Curing in case of fast drying: Free surfaces have to be covered with plastic sheets or thermo mats. For optimal drying the cover should be removed after about 2 hours. It is not recommended to use a liquid curing compound.

More curings can be useful depending on the installation situation - You are welcome to contact us for further information!



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