



Product Information Concretum® Q-FLASH 10/20

Rapid-Hardening Concrete

Description

Concretum® Q-FLASH 10/20 is a rapid-hardening type of concrete. Only ten hours after the production, this type of concrete is ready for loading. Furthermore, Concretum® Q-FLASH 10/20 dries very fast which accelerates the construction process. Concretum® Q-FLASH 10/20 is produced in concrete plants.

Applications

- All sorts of rapid-hardening concrete applications.
- In general for casting concrete structures that dry extremely fast.
- Maintenance and construction of concrete carriageways with very short off-times (roundabouts, bus stops etc.)
- Screeds and repair of bridge floors.
- Foundations, supporting members, bottom plates and floor slabs.
- Replacement and maintenance of solid railway basements.
- Production of precast concrete elements with short stripping times.

Material properties

- Concretum® Q-FLASH 10/20 enables the production of concrete elements which feature a compressive strength f_c of at least 20 N/mm² only ten hours after concrete mixing.
- 48 hours after mixing Concretum® Q-FLASH 10/20 arrives at a moisture content of 4.0 CM-%. This enables immediate subsequent applications such as sealings on bridgedecks or flooring systems.
- The workability of Concretum® Q-FLASH 10/20 is good for at least 1.5 hours.
- Concretum® Q-FLASH 10/20 features low shrinkage and low heat of hydration. Therefore, construction units made of Concretum® Q-FLASH 10/20 show low risk of cracking and are immensely durable.
- Depending on the application, Concretum® Q-FLASH 10/20 can be reinforced by Concretum® SUPERFIBER. The use of these high modulus polymer fibers (Young's Modulus higher than concrete) allows the replacement of secondary reinforcement and yet an efficient cracking control.



Norm classification

SN EN 206-1: Concrete - Part 1: Specification, performance, production and conformity:

Class of strength	at least C40/50
Classes of expositions	to XC4, XD3, to XF4 (depending on the application)
Maximum size of aggregate	Dmax = 8 to 32 mm (depending on the application)
Class of consistence	C2 or 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)	qw max. 10 g/(m ² h)
Chloride resistance (SIA 262/1 Anh. B)	DCI max. 10*10 ⁻¹² m ² /s
Frost and de-icing salt resistance (SIA 262/1 Anh. C)	medium to high (depending on application and production)

Working information

- The processing time is approximately 1.5 hours.
- No addition of water or additives on the building site!
- Temperature of fresh concrete at the installation: 12 bis 30 °C.
- For the compaction apply the same regulations as for the installation of traditional high-quality concretes.
- It is necessary to work the surface and begin the curing immediately after the installation. This must be carried out step by step!
- Striking time: at least 10 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. 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 6 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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