



KORODUR

Fast-Setting Concrete Systems



Rapid Set[®] Concrete

Description

Rapid Set Concrete is a fast-setting concrete based on the high-performance binder Rapid Set, which features fast use, high strengths and durability. Rapid Set Concrete is suitable for a wide range of indoor and outdoor applications, in particular for the restoration of concrete surfaces in the infrastructure sector such as concrete roads or airfield operating areas such as take-off and landing runways. Early use and release for traffic already two hours after placement can be achieved reliably. Rapid Set Concrete is mixed directly on site using special mobile concrete mixers (e.g. Cemen Tech). Hardened concrete tests in accordance with the Technical Delivery Conditions for Construction Materials and Construction Material Mixtures for the Structural Maintenance of Traffic Surfacing (TL BEB-StB).

Rapid Set Concrete for traffic areas

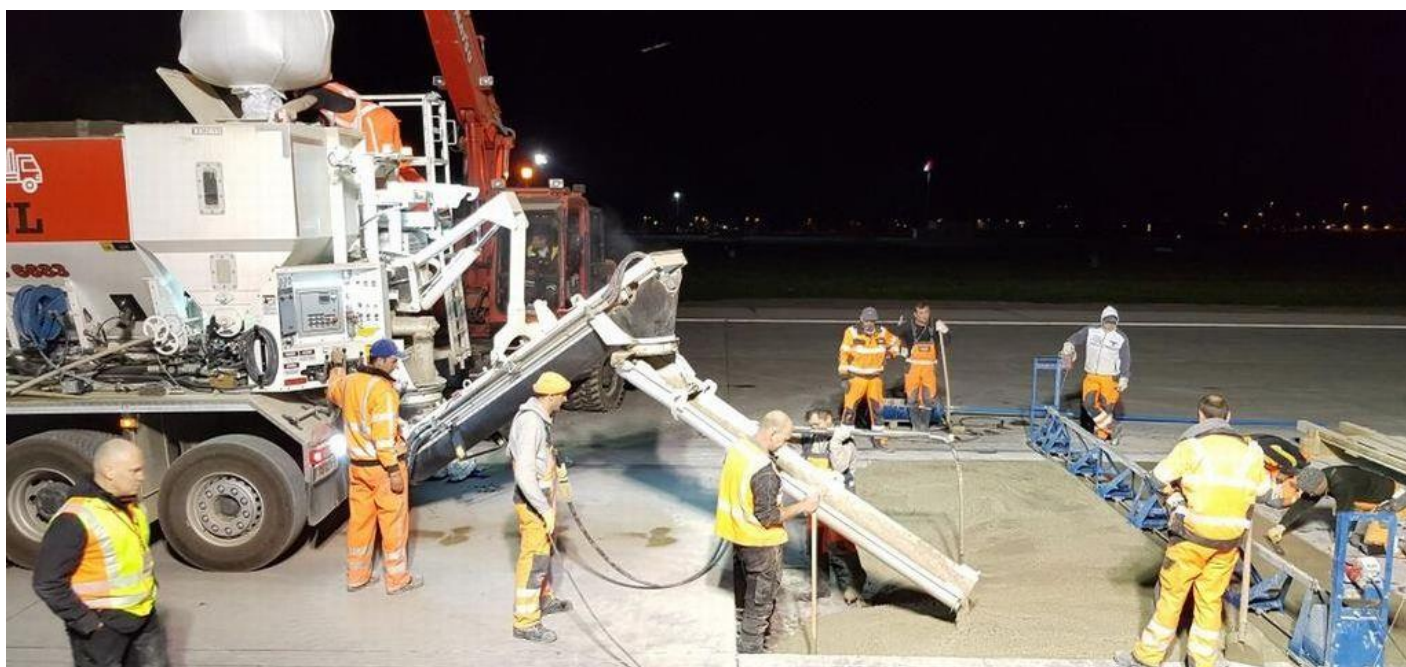
Traffic areas made of concrete are subject to the highest demands in regard of statics, durability and resistance to physical and chemical stresses. The time factor is also a decisive factor in order to keep the construction works as short as possible and to return the traffic areas to use as quickly as possible. For more than 25 years, Rapid Set Concrete has been accepted and established in the United States as a simple and intelligent solution to meet these high demands. In the USA and now also in Europe, a wide variety of infrastructure projects are being realized with Rapid Set Concrete profiting of its excellent properties. Due to the fast-setting properties of the concrete, repairs can be carried out at low-traffic times, e.g. at night, and the surfaces can be reopened to traffic just 2 hours after placement. The excellent performance properties of Rapid Set Concrete allow for a broad range of applications.

Technical Data

Mixing ratio as an example for fast-setting concrete for the repair of traffic areas	Rapid Set Cement aggregates A/B 16 water/cement ratio	360 kg approx. 1900 kg approx. 0,45
Fresh concrete consistency	slump	F3 - F4
Processing time	depending on the formulation and weather conditions	approx. 5 - 30 min
Temperature	processing, ambient and sub-base temperature	≥ 5 °C

Set concrete properties acc. to TL BEB-StB – initial test for fast-setting concrete type A

Compressive strength $f_{c,cube}$	after 2 hours after 12 hours after 28 days	≥ 20 MPa ≥ 30 MPa ≥ 45 MPa
Flexural strength $f_{ct,bz}$	after 5 hours after 28 days	≥ 3,0 MPa ≥ 4,5 MPa
Frost and deicer resistance	CDF-Test	≤ 1.500 g/m ²



KOROCRETE Fast-Setting Concrete

Description

KOROCRETE is a fast-setting concrete based on KORODUR FSCem, a cementitious, dimensionally stable, fast-setting screed binder on ternary basis for the production of heavy-duty concrete floors, which are quickly usable and early ready for covering (strength classes C35/45 to C50/60 based on DIN EN 206).

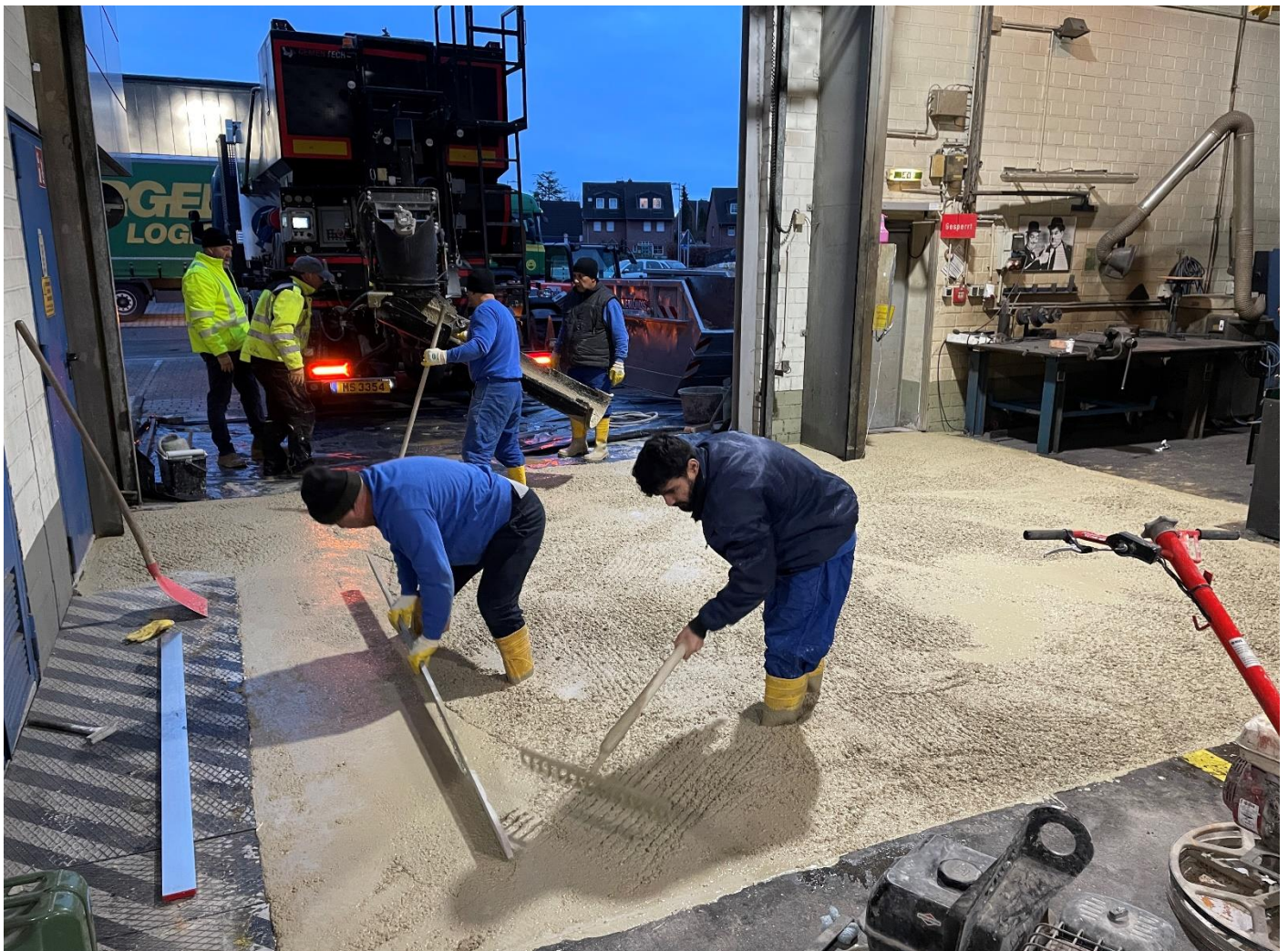
Due to the high early strength, the flooring areas can be used and released to traffic within a few hours after their placement. KOROCRETE rapid concrete is mixed directly on the construction site by means of special concrete mixers (e.g. Cemen Tech).

KOROCRETE Fast-Setting Concrete for industrial areas

For production of quickly usable concrete floors, indoors and outdoors. Repair of concrete floors with high durability due to dimensional stability and high final concrete strengths.

Technical Data

Mixing ratio as an example for fast-setting concrete for the repair of industrial areas	KORODUR FSCem aggregates A/B 16 water/cement ratio	360 kg approx. 1900 kg approx. 0,47
Fresh concrete consistency	slump	F3 - F4
Processing time	depending on the formulation and weather conditions	approx. 45 - 60 min
Temperature	processing, ambient and sub-base temperature	$\geq 5\text{ }^{\circ}\text{C}$
Compressive strength $f_{c,cube}$	after 8 hours after 24 hours after 28 days	$\geq 20\text{ MPa}$ $\geq 35\text{ MPa}$ $\geq 60\text{ MPa}$



KORODUR Fast-Setting Concrete Systems

Properties

Rapid Set Concrete for traffic areas

- traffic areas, airport operational surfaces
- grain size: 0/8, 0/16, 0/22 (WS-grain)
- very fast-setting
- processing time: 15 - 30 minutes
- dimensionally stable
- ready for stress after 2 hours
- surface finish: broom finish, limited smoothing degree
- frost and deicer resistant
- air-entrained-concrete
- tests acc. to TL BEB-StB
- pumpable

KOROCRETE Fast-Setting Concrete for industrial areas

- industrial floors, hall floors, logistic areas
- grain size: 0/8, 0/16
- fast-setting
- processing time: 45 - 60 minutes
- dimensionally stable
- ready for stress after 8 hours
- surface finish: broom finish, smoothable
- pumpable



HINTS: The specifications provided in this data sheet for application and processing are based on tests carried out by KORODUR under ideal conditions in the laboratory and acc. to the relevant technical regulations. Therefore, the indicated data don't represent directions for application or a quality agreement in the meaning of § 434 (1) BGB, no regulation in the meaning of § 434 (2) sentence 2 BGB (German Civil Code) and no guarantee for practical application. Due to the differing conditions on site, preliminary own tests and suitability checks are required before application. Please consider the currently valid product information as well as the relevant safety data sheet acc. to Regulation (EC) No. 1907/2006 in the latest version – also published on the internet: www.korodur.de.



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