

CEMENT ALL Plus

Multipurpose Repair Mortar

Status 01/2021

mineral, synthetic-modified, multipurpose fast-setting repair mortar for layer thickness from "0" - 100 mm

DESCRIPTION

Rapid Set CEMENT ALL Plus is a mineral, synthetic-modified, multipurpose fast-setting repair mortar based on special cement technology. Ideal where rapid strength, durability and low shrinkage setting are required. CEMENT ALL Plus can be applied in thickness from nearly "0" - 100 mm. Initial set after 15 minutes, ready for stress in approx. 1 hour.
Utmost protection against carbonation with evidence acc. to DIN EN 13295 (carbonation resistance). Due to the composition and with reference to DIN EN 206-1, CEMENT ALL Plus meets the following exposure classes: XC4, XF4 and XA3.

APPLICATION

CEMENT ALL Plus is a multipurpose, synthetic-modified, fast-setting repair mortar for general concrete repair, dowelling and anchoring, injection, industrial grouting, formwork and highway repair. Indoors and outdoors, also in wet areas.

SUSTAINABLE CONSTRUCTION

The use of CEMENT ALL Plus reduces the CO_2 footprint, increases the energy and resource efficiency and conserves natural resources. The production of Rapid Set cement generates 30 % less CO_2 emissions than conventional Portland Cement. For further information (e.g. LEED values) contact KORODUR.

PROPERTIES

- multipurpose
- repair and new construction
- horizontal and vertical application
- layer thickness "0" - 100 mm
- fast-setting, ready for stress only approx. 1 hour after final set
- high-strength
- low tension
- synthetic-modified
- elevated resistance to carbonation
- improved frost/de-icer resistance due to synthetic-modification
- sulfate resistant
- chloride-free
- resistant against many different chemical attacks
- excellent bond: directly, without bonding compound
- curing with water only
- indoors and outdoors
- improved shelf-life

TECHNICAL DATA

Quality	C55/67	
Grain size	0 - 1 mm	
Colour	light grey	
Standard layer thickness *in the first working step depending on the chosen consistency	floor ceiling / overhead wall	10 - 100 mm 5 - 10 mm* 5 - 15 mm*
Setting time with reference to DIN EN 196-3	initial set final set	approx. 15 minutes approx. 35 minutes
Ready for stress	after approx. 60 minutes	
Ready for covering The readiness for covering is independent of the layer thickness and is influenced by the ambient temperature and air humidity. It is recommended to check the residual moisture by a suitable measurement.	vapor-permeable coverings (e.g. tiles, vapor-permeable paints)	after approx. 2 hours
	diffusion-proof coverings (e.g. parquet, bitumen-waterproofing)	after approx. 16 hours

Compressive strength [N/mm²] DIN EN 1015-11	after 60 minutes after 180 minutes after 28 days	> 20,0 N/mm² > 31,0 N/mm² > 62,0 N/mm²
Flexural strength [N/mm²] DIN EN 1015-11	after 60 minutes after 180 minutes after 28 days	> 6,0 N/mm² > 8,0 N/mm² > 11,0 N/mm²
Bond strength (by pull-off) [N/mm²] DIN EN 1542	on average approx. 2,1 N/mm² demands fulfilled	
Static modulus of elasticity [N/mm²] DIN EN 13412	approx. 31.700 N/mm² demands fulfilled	
Sulfate resistance test acc. to Wittekindt	demands fulfilled	
Penetration test penetration of water-hazardous substances acc. to DAfStb-guideline	penetration depth on average demands fulfilled	
Frost/de-icer test (CDF) BWA-guideline frost test	demands fulfilled	
Chloride ion content DIN EN 1015-17	on average 0,009 demands fulfilled	
Temperature	≥ 5 °C processing, ambient and sub-base temperature	
Water addition	per 25 kg bag	approx. 4 l
Material consumption	per m² per mm	approx. 2,0 kg

PROCESSING

Sub-base

Clean sub-base from loose debris, cement slurry, dust, acids, oils, greases. For full bond, the surface must be free from cracks, even, rough and open-pore. The surface bond strength required in the technical guidelines have to be observed (the value must not be less than 1,0 N/mm²). Before the application, pre-wet the sub-base thoroughly. In case of highly absorbent sub-bases, the pre-wetting may have to be repeated several times. The formation of a water film or puddles has to be avoided.

Processing

Before starting work, make sure that all personnel and equipment/tools required are in place. Mix CEMENT ALL Plus with the specified quantity of water depending on the processing method and mix for approx. 1 - 3 minutes in suitable pan type mixer or use stirrer. To mix, first add water into the mixing container. Then, whilst the mixer/stirrer is running, add CEMENT ALL Plus. Use less water to achieve higher strength. Do NOT exceed the maximum water admixture. CEMENT ALL Plus may be processed in traditional methods. The final finish should take place as soon as possible. CEMENT ALL Plus may be trowelled, floated or textured. Apply in one complete layer, i.e. not in several layers, and as uniformly as possible. Do not apply on frozen sub-base. When compacting, avoid the entry of air voids. Temperature > 20 °C will reduce the working time, temperature < 20 °C may delay the strength development. To extend working time, add Rapid Set SET Control (retarder). To increase flowability, add Rapid Set FLOW Control (plasticizer) and the additive FAST to accelerate the setting time (see data sheet CONCRETE PHARMACY).

CURING

Begin water curing as soon as the surface has lost its moist sheen. Keep the surface wetted for 1 hour until the product has achieved sufficient strength. When experiencing extended setting times, due to cold temperature or the use of a retarder, longer curing times may be required.

SUPPLY

25 kg special paper packaging

STORAGE

Dry, like cement. Shelf-life approx. 12 months.

HINTS: This product contains cement and has an alkaline reaction with moisture/water. Therefore protect skin and eyes. In case of contact with eyes, consult a doctor. 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.