

ALL-CRETE 20

Rapid-setting cementitious patching material

degussa.

Construction Chemicals

Description

All-Crete 20 is a one-component rapid-setting cementitious patching material that can be covered by asphalt or concrete in 20 minutes following application. It can be used to repair both horizontal and vertical concrete surfaces, above and below grade.

Yield

0.45 ft² per 50 lb bag
(0.013 m² per 22.5 kg)

0.50 ft² per 60 lb pail
(0.014 m² per 27 kg)

Packaging

50 lb (22.7 kg) bags
60 lb (27 kg) pails

Shelf Life

1 year when properly stored

Storage

Store in unopened containers at 60 - 80° F (16 to 27° C) in clean, dry conditions.

Features

- Rapid setting
- High strength
- One component
- Durable
- Can be shaped and molded for up to 10 minutes

Benefits

- Sets in 20 minutes
- Long-lasting repairs
- Easy to prepare and mix
- Resists oil, grease, salt solutions, diesel fuel
- User friendly applications

Where to Use

Application

- Concrete repairs
- Precast and concrete pipe repairs

Location

- Horizontal or vertical
- Interior or exterior
- Above and below grade

How to Apply

Surface Preparation

CONCRETE

1. All substrates must be clean and free of dust, plaster, oil, paint, grease, corrosion deposits, and any other contaminants.
2. Remove excess laitance by mechanical means.
3. Mechanically roughen smooth substrates by scrubbing or needle gun to provide an adequate anchor profile.
4. Presoak the prepared concrete surface to a saturated surface-dry (SSD) condition with no standing water.
5. To get maximum bonding strength, control the depth of repairs. Perimeter cut the edges of repair areas at least 3/8" (10 mm).

STEEL

Expose any steel reinforcement in the repair area around it full 360° circumference and clean to remove all loose scale and corrosion deposits

Apply a uniform coat of ThoRoc® Zincrich Rebar Primer and allow to dry. Touch up any voids or defects. Allow to dry..

Mixing

1. Water ratios of 4 - 5 qts (3.7 - 4.8 L) per 50 lbs (22.7 kg) of powder will produce a mixed consistency from putty to plastic, depending upon handling preference and job requirements.
2. Add All-Crete 20 to water and mix for 2 minutes, using a slow speed drill (400 - 600 rpm) and suitable mixing blade or mixing by hand. Note that the temperature of the substrate, water, material, and air will affect the mixing time, mixed consistency, and set..

Application

1. Apply scrub coat of the mixed material by brushing it into the SSD substrate. Do not dilute the scrub coat.
2. While scrub coat is still wet, apply All-Crete 20, ensuring good compaction of the mortar by tamping or troweling on both horizontal and vertical surfaces. Do not place material in layers greater than 3" (76 mm) at a time.

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Technical Data

Composition

All-Crete 20 is proprietary blend of cement, graded aggregates, shrinkage-compensated agents, and set-control additives.

Test Data

The following results were obtained with a water / powder ratio of 4 qts (3.8 L) per 50 lb (22.7 kg) bag.

PROPERTY	RESULTS	TEST METHODS
Compressive strength, psi (MPa)		ASTM C 109
1 day	4,200 (28.9)	
3 days	5,800 (40.0)	
7 days	6,650 (45.9)	
14 days	7,310 (50.4)	
28 days	7,950 (54.8)	
Bond strength, psi (MPa)		ASTM C 1042
7 days	500 (3.4)	
28 days	1,000 (6.9)	
Flexural strength, psi (MPa)		ASTM C 293
7 days	1,100 (7.6)	
28 days	1,500 (10.3)	
Splitting tensile strength, psi (MPa)		ASTM C 496
7 days	650 (4.5)	
28 days	800 (5.5)	
Set times, min, at 70° F (21° C)		ASTM C 191
Initial	8 – 12	
Final	15 – 20	

All application and performance values are typical for the material, but may vary with test methods, conditions, and configurations.

- Initial set will occur in 8 - 12 minutes, final set in 15 - 20 minutes.

Curing

- Proper curing is extremely important. For peak performance of the repair, cure immediately after finishing in accordance with good concrete practices (refer to ACI 308).
- An ASTM C 309-compliant curing compound may be used in place of moist curing. Apply the curing compound when the surface cannot be marred by the application process.

Clean Up

- Clean up with water before cure. Cured must be mechanically removed.

For Best Performance

- All-Crete 20 is recommended as a general repair material for above or below grade applications. For long term durability and increased performance in applications subject to constant moisture or continuous immersion, the use of ThoRoc SP15 Spray Mortar or MBT Protection and Repair Emaco S88 CI is recommended. Contact your Degussa Building Systems Sales Representative for additional information.
- Not recommended for placing at temperatures below 40° F (4° C).
- Maximum 3" (76 mm)
- Never retemper after initial set.
- Do not overmix.
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current version.

- Proper application is the responsibility of the user. Field visits by Degussa personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

Health and Safety

ALL-CRETE 20

Caution

All-Crete 20 contains silicon dioxide, Portland cement, and calcium sulfate.

Risks

Product is alkaline on contact with water and may cause injury to skin or eyes. Ingestion or inhalation of dust may cause irritation. Contains free respirable quartz, which has been listed as a suspected human carcinogen by NTP and IARC. Repeated or prolonged overexposure

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to free respirable quartz may cause silicosis or other serious and delayed lung injury.

Precautions

KEEP OUT OF REACH OF CHILDREN. Prevent contact with skin and eyes. Prevent inhalation of dust. DO NOT take internally. Use only with adequate ventilation. Use impervious glove, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable federal, state and local regulations.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes, SEEK IMMEDIATE MEDICAL ATTENTION. In case of skin contact wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION. Refer to Material Safety Data Sheet (MSDS) for further information.

Proposition 65

This product does not contain materials listed by the state of California as known to cause cancer, birth defects, or reproductive harm.

VOC Content

0 lbs/gal or 0 g/L.

For medical emergencies only, call ChemTrec (1-800-424-9300).

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