

PRODUCT DATA

3 03 01 00 Maintenance of Concrete

ALL-CRETE 20

Rapid-setting cementitious patching material

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 ft³ per 50 lb bag
(0.013 m³ per 22.5 kg)

0.50 ft³ per 60 lb pail
(0.014 m³ 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 to 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 scabbling 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

1. Expose any steel reinforcement in the repair area around its full 360° circumference and clean to remove all loose scale and corrosion deposits.
2. Apply a uniform coat of 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.
3. Initial set will occur in 8 – 12 minutes, final set in 15 – 20 minutes.

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.

Curing

1. 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).

2. 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 material must be mechanically removed.

For Best Performance

- Not recommended for continuous immersion or applications subject to constant moisture.
- Not recommended for placing at temperatures below 40° F (4° C).
- Maximum 3" (76 mm) per layer.
- 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 BASF 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 Silica, crystalline quartz; Portland cement; Iron oxide; Fly ash; Clay (kaolin).

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 small amount of free respirable quartz which has been listed as a suspected human carcinogen by NTP and IARC. Repeated or prolonged overexposure to free respirable quartz may cause silicosis or other serious and delayed lung injury.

Precautions

Avoid contact with skin, eyes and clothing. Prevent inhalation of dust. Wash thoroughly after handling. Keep container closed when not in use. DO NOT take internally. Use only with adequate ventilation. Use impervious gloves, 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. 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 contains material listed by the State of California as known to cause cancer, birth defects or other reproductive harm.

VOC Content

0 g/L or 0 lbs/gal less water and exempt solvents.

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

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