

# K A U F M A N

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INFORMATION

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## Duracrete II AG

### Description

Duracrete II AG is a fast setting, non-staining, non-metallic and very rapid hardening cement based repair mortar with aggregate included. Compressive strengths of 2000 psi are achieved in only 30 minutes, 4,000 psi. in one hour at 72 °F.

Duracrete II AG is composed of cement, special aggregates, accelerators, and water reducing agents. Since this is not a gypsum-based product, it can be used outdoors, and it will gain strength faster than any magnesium phosphate based grout, while maintaining dimensional stability. In addition, Duracrete II AG includes our migrating corrosion inhibiting agent for longer lasting repairs.

### Uses

Duracrete II AG is designed for full depth repairs on highways, bridge decks, pavement joint repairs, and other highway structural repairs. In addition, parking garage repairs are also an excellent use. The fast setting and high early strength properties reduce prolonged lane shut downs and resulting traffic tie-ups.

### Advantages

Shrinkage compensated. Single component-just add water. Rapid hardening- open to traffic in just 1/2 hour. Duracrete II AG is water resistant after it's initial set. Excellent resistance to de-icing salts and sulfates. Hard wearing surface can be broom finished to achieve slip resistance on sloped areas. Aggregate extended for full depth repairs.

### Specification

ASTM C-928, Very Rapid Hardening (R1)

### Packaging & Yield

50 lb. polyethylene lined bags yields approximately .45 cubic feet.

### Directions

#### Surface Preparation

The substrate must be structurally sound and free of foreign matter. Edges of area to be patched must be vertical and be at least 1/2" deep. All exposed reinforcing bars should be exposed to 100% of their circumference, thoroughly cleaned to remove corrosion deposits and primed with SurePoxy HM EPL or HM 12.

Flush area to receive patch with clean water to remove all dust and thoroughly dampen the concrete with water. Prior to placement, remove all excess water. The use of a slurry coat is advised immediately prior to placement of Duracrete II. For maximum bond strength to existing concrete, apply SurePoxy HM or HM EPL as a bonding agent.

### Physical Properties, Regular, Neat – 75°F

Initial set:	10 min.
Final set:	28 min.
(ASTM C-191)	
Compressive Strength	2 hrs. 5,000 psi
(ASTM C-109)	3 hrs. 7,000 psi
	1 day 6,700 psi
	7 days 9,900 psi
	28 days 10,700 psi
Bond Strength	1 day 1,710 psi
(ASTM C-882)	7 days 2,440 psi
Flexural Strength	1 Day 700 psi
(ASTM C-78)	7 Days 1,000 psi
Length Change	In Air: -0.07%
(ASTM C- 157)	In Water: +0.04%
Scaling Resistance	2 kg/m <sup>2</sup>
(ASTM C-672, 25 cycles)	
Chloride Ion Permeability	Very Low
(ASTM C-1202, 360 minutes)	

### Mixing

Use 2.5 qts (5 pints) of water per 50 lb bag of Duracrete II AG. Always add the water to the mixing container first, then add the powder. Use a mortar-type or forced action type mixer to ensure optimum mixing. Mix for 5 minutes before using. Place immediately. Do not mix by hand. Apply at least 2" deep. For superior impact resistance and bond strength, replace 1/2 water with SureBond Acrylic bonding agent.

## **Application**

Saw cut the area to be patched so that edges are straight and flush. In temperatures less than 85° F, a maximum of 10 minutes should be allowed to mix, place, and finish Duracrete II AG. Immediately place the properly mixed Duracrete II AG into the prepared area, working from one side to the other. Work and tamp down the material firmly into the bottom and sides of the patch to ensure a good bond. Screed and trowel the material level to the existing concrete. Seal the edges and saw cuts with light troweling. Minimal finishing is required. When properly leveled, Duracrete II AG may be broomed for a slip-resistant surface.

The temperature of the mix as well as the ambient temperatures of the area to be repaired will greatly affect the working and set times of Duracrete II AG. If using when temperatures are greater than 85° F, we recommend the use of Duracrete II AG HW, since it will provide slightly longer setting and working times. However if HW (hot weather) versions are used, the contractor would have to wait up to an hour before opening the patch up to traffic. As an alternate, the user could cool regular Duracrete II AG and gauging water down to temperatures below 85° F.

During cold weather, (below 40°F) heat the area to be patched until warm to the touch. Also heat Duracrete II AG and use at least 90°F water or tent the area to retain heat during the initial set. Curing blankets may also help.

## **Curing**

Proper curing is extremely important. Immediately after finishing, apply a coat of a good quality curing compound such as SureCure 25, SureCure 25 Emulsion or Thinfilm.

## **Shelf Life**

12 months from manufacture date, when stored unopened under recommended conditions. Store product between 40 and 85°F at low humidity. Keep containers tightly closed.

## **Precautions**

Do not feather-edge. Thickness must be at least ½". Substrate should be damp during application. Read Material Safety Data before using.