



## Bridge Deck Overlay – Cal Trans

### Description

This specification includes the repair and resurfacing methods used when applying **Americrete** products over cracked, spalled, leaking and deteriorated structures. This method of repair will create a slip resistant surface designed for heavy vehicular traffic. This **Americrete** system can repair the entire structure with minimum weight added to the dead load of the structure. This means that **Americrete** can be used without re-engineering the concrete structure. The **Americrete AR-6,500CT System** is engineered for use as a long lasting, economical and environmentally safe alternative to solvent-based urethanes, epoxies, and high molecular weight methacrylates. When installed correctly, **AR-6,500CT System** will meet or exceed the Cal Trans coefficient of friction test of 0.35.

### Uses

**Americrete AR-650CT Resurfacer** is recommended for oxidized asphalt and worn concrete pavement which experience high vehicular traffic.

- Bridge Deck
- Entry/Exit Ramps
- Intersections

### Features

- Cohesive bond to both asphalt and concrete
- Extremely flexible
- Skid resistant
- Excellent strength development
- No V.O.C.'s/no strong odor
- No milling required
- UV and water resistant
- Resistant to automotive fluids
- Quick drying

### Caution

It is imperative that the structure being repaired is structurally sound. Deteriorated, cracked or spalled concrete can be repaired. **Americrete** recommends that all structural concrete substrates be tested for structural integrity and chemical contamination prior to application of any surfacing materials.

## Preparation of Surface

### Existing Concrete Structures (Bridges)

All existing coatings, sealers, curing agents and other foreign materials must be removed by shot blast equipment in order to reveal clean concrete. Once removed, contaminated materials shall be taken away to an approved disposal site. If necessary, any left over debris, stains, or residue can be pressure washed to achieve a clean, laticence free surface. **Americrete A-100 Degreaser** can also be used to rid the surface of any oils, grease, or petroleum products. Be sure all residue from the degreaser or cleaner is completely removed before applying product.

### Surface Repairs

Small spalls and cracks do not require pre-filling. Large spalls and cracks should be pre-filled prior to resurfacing using **Americrete AR-650CT Resurfacer** or for a quick-set material, use **AR-625CT Spall Repair**.

**Note: If using AR-625CT Spall Repair, prime surface repair area with A-300 Concrete Bonder Admix** before resurfacing with **AR-650CT Resurfacer**.

### Surface Leveling (Patching)

Low areas, surface voids and other irregularities that cannot be repaired using a thin set application, may be repaired using this leveling procedure prior to resurfacing. Prime area prior to application with **A-300 Concrete Bonder Admix** and allow it to become tacky. Use **Americrete AR-650CT Resurfacer**, mixed with 5 ½ to 6 ½ quarts of water per bag, for any areas from 1/8" to ½" for deeper areas; larger aggregate can be added for larger fills.

### Thin Set Overlay

Upon completion of repairs, the surface shall be overlaid with one application of **Americrete AR-650CT Resurfacer**. The objective is to apply one thin application, at a rate of approximately 80 square feet per 50 pound bag of material. This will produce a thin build-up of material without creating a significant dead load on the structure. The surface that is being coated must be kept damp at all times during the application process by using a light spray of water. Do not let water puddle.

The **Americrete AR-650CT Resurfacer** mixture shall be poured in windrows and spread immediately with squeegees or other spreading devices (i.e. brooms) over the surface. Material shall flow toward the operator, leaving no ridges or excess material. Should material run out, apply a light spray of water at the end of the windrow and feather the edge, using a squeegee. When adding new material, first re-dampen the edge with a light spray of water.

### Anti Skid (To meet Cal Trans coefficient of friction test of 0.35)

**Americrete AR-650CT Resurfacer** already contains an anti skid aggregate which meets Cal Trans coefficient of friction test of 0.35.

**Bridge Deck Material List - 2000 Square Feet**

1. 25 bags **AR-650CT Resurfacer** at 80 sq. ft. Per 50 pound bag or 1250 lbs.
2. 14 gallons of **A-1200 RS Natural Seal**

**Note: If moisture vapor is evident, use A-200 Prep and Seal before applying AR-650CT.**

**Mixing Procedures**

Mix 4 ½ to 6 quarts of water per bag of **AR-650CT Resurfacer**. **Note: The amount of water used will be determined by the ambient temperature during application.** Mix materials until uniformly blended, a minimum of two minutes. For large mixing operations material can be mixed with a paddle stucco-mixing machine or other mixing devices.

**Application Procedure**

1. Bead blast or grind the surface to open the pores of the concrete and to remove all loose and/or contaminated concrete.
2. Keep concrete moist, and apply **AR-650CT Resurfacer** with a broom to achieve a broom finish.  
**Note: Do not allow water to puddle on the surface. Broom away excess water.**
3. Allow the **AR-650CT** to dry 24 hours before applying sealer.
4. Seal surface with **A-1200RS Natural Seal** by using a sprayer apparatus and brooming the surface at a rate of approximately 150 square feet per gallon. Allow to dry 24 hours before opening to vehicular traffic.

**Limitations**

- Minimum substrate, and ambient temperature is 55 degrees F and rising.
- Minimum age of concrete before application is 30 days.
- Do not dilute.
- Material should not be applied when rain is imminent or forecast within a 24-hour period of application.
- Do not remix the material.

**Clean Up**

All materials are water-soluble. Personnel can use soap and water to clean materials that have come into contact with skin. Water should also be used to clean all tools and equipment.

**It is highly recommended for your first job to have Americrete personnel on-site.**

**Product Warranty:**

Americrete, Inc. blends its products to the highest quality. Warranty does not apply to any persons, company or private individuals who have not attended an Americrete, Inc. training class and/or have not been approved as a Certified Applicator of Americrete, Inc. products. This warranty is limited to the replacement

of material (product) for a period of 1 year for single product application and for a period of 5 years for entire system application only if the maintenance has been performed as stated above and the product(s) have been proven to be defective. Product must be applied to manufacturers specifications, and over a sound substrate. There is no warranty for cracking, damage to substrates or replacement of any tangible items. This warranty, dated October 2004, supercedes all previous warranties.

***Note: Americrete products are to be applied only when surface temperatures are at 55 degrees or higher. Do not apply when rain or other precipitation is expected within 24 hours.***