



## **Parking Structure Repair & Resurfacing**

### **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 parking structure.

### **Caution**

It is imperative that the structure that is to be repaired be 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**

**Americrete** will bond to properly cleaned concrete surfaces. Neither mechanical nor chemical abrasion is necessary in order for **Americrete** to properly adhere to the surface. See "Cleaning" below.

### **Existing Coated Floors**

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 in sealed containers to a pre-determined and approved disposal site. This existing concrete shall be tested for carbonation using a carbonation depth analysis, followed by a test to determine structural stability.

### **Surface Stabilization (with Americrete Concrete Prep and Seal)**

Chalky, weak or freeze-thaw damaged concrete must be treated with at least 2 applications of **A-200 Concrete Prep and Seal** penetrating sealer to increase concrete strength and reduce vapor transmission. Apply 2 applications of **A-200 Concrete Prep and Seal** over the entire dry surface with a low-pressure sprayer.

Spray evenly to saturate the surface, but do not allow the material to puddle. This process will increase concrete strength and reduce moisture vapor emissions substantially. Wait 24 hours before applying any **Americrete** cementitious coating. Note: If efflorescence continues, repeat this step. Continue only if no efflorescence is present. See Americrete's **A-20,000 Vapor Emission Specification**.

### **Cleaning**

Clean and etch floor with **A-100 Degreaser** to remove dirt, grease and oil from the surface. The surface shall be cleaned thoroughly of all contamination by scrubbing the surface with **A-100 Degreaser**. Broom Degreaser evenly over the entire surface. Allow the degreaser to dwell on the surface for approximately 30 minutes, then completely rinse with clean water 2 times. Allow the surface to dry before applying other coatings or sealers.

**A-200 Concrete Prep and Seal** penetrating sealer is also used to control moisture vapor, especially with slabs on or below grade.

### **Application**

**Note: Application is by Approved Applicators only.**

### **Surface Repairs**

Small spalls and cracks do not require pre-filling. Large spalls and cracks should be pre-filled prior to resurfacing using **Americrete Crack Repair Procedure**. Specification number **A-17,000**.

### **Surface Leveling**

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. Use **A-600 Concrete Resurfacer** mixed with 5-6 quarts per bag, for any areas from 1/8" to 1/2". Deeper holes may need a large aggregate mixed into the product.

### **Application of A-600 Concrete Resurfacer**

The **A-600 Concrete Resurfacer** mixture shall be poured in windrows and spread immediately with squeegees 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 to the damp windrow, first re-dampen the edge to insure the bond between the new material and old. Remove any ridges or irregularities from the first application using a floor scraper or pole sander before applying the second coat. Apply the second application when the first application is thoroughly dry. Normally 2 applications can be installed in 1 day if the surface is an exterior surface exposed to full sunlight. Surfaces without full sunlight will require an overnight cure between applications. The finished surface can be a smooth, broom finish or a sandy finish.

## Options

### Americrete Flex Mesh

Although **Americrete** products are flexible, structural or **moving** cracks may reappear as hairline cracks. These hairline cracks are not always visible to the naked eye. Years of field experience in the repair of cracked surfaces have proven that embedding the **Americrete Flex Mesh A-1600** into **A-600 Concrete Resurfacer** will substantially reduce re-cracking over structural surfaces, on or above grade.

### Finish Applications

Apply 2 coats of **A-1475 Colored Polyurethane**. Depending upon the porosity of the concrete, additional coats may be required. For heavy vehicular traffic or forklift traffic. Always apply a third coat of **A-1475 Colored Polyurethane**. Anti-skid beads may be applied for a skid-resistant surface.

### Application Procedure

1. V-grind out all cracks. Remove all sealer and curing compounds, be sure the pores of the concrete are open; do not apply **A-600 Concrete Resurfacer** over non porous surfaces, hand trowel finishes or sealer and curing compounds.
2. If oil is present, always apply **A-100 Degreaser** to concrete areas, at a rate of 300 square feet per gallon, with a stiff bristle broom. Leave on concrete 30 to 60 minutes, and rinse off with a hose or then power wash the surface.
3. While the surface is dry, apply **A-200 Concrete Prep and Seal** at a rate of 200 to 300 square feet per gallon, with a low-pressure sprayer. Allow **A-200 Concrete Prep and Seal** to dry for 24 hours. If white efflorescence appears, remove with water and allow to dry for another 24 hours. If efflorescence re-appears, repeat the process and 24-hour waiting period. Continue to do this until no efflorescence appears – **this pertains to on-grade surfaces only.**
4. Repair the cracks by using the **Americrete Crack Repair Kit A-1700**. See Americrete's **A-17,000 Crack Repair Specification** for instructions.
5. Mist surface with water. Keep the surface damp with water. Apply 2 coats of **A-600 Concrete Resurfacer** to the area by squeegee or trowel, at a rate of 300 square feet per bag of **A-600 Resurfacer**. Apply broom finish or leave smooth. Surface will not self-level.
6. Apply two coats of **A-1475 Colored Polyurethane** over the top to protect surface. Note: If surface is to remain concrete – with no **A-7000 Epoxy** or **A-1475 Colored Polyurethane**, the surface must be sealed with two coats of **High Shine A-1400, High Shine Plus A-1450, A-4200 Shine and Seal** or **A-4201 Shine and Seal – Matte Finish**. See **Specification A-9,250**.

**Note: Do not apply High Shine A-1400 or A-1450 High Shine Plus to wet or damp surfaces, or when precipitation is expected within 24 hours.**

**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.**