



## Surface Preparation for Concrete Substrates

Surface preparation is considered to be the most important step of any floor coating application. Improper surface preparation could turn a simple application, into a lengthy and difficult repair. The following conditions will dictate the type of surface preparation:

### 1. Presence of Curing compounds and sealers

Curing compounds and sealants must be mechanically removed from the concrete surface prior to all resinous flooring applications. Recommended techniques include:

- a. Diamond grind to virgin concrete surface removing all containments. Recommend grinding with an **EDCO** dual disc floor grinder model # 2EC-1.5b or equivalent
- b. Hand-grind with diamond angle grinder\* for vertical surfaces and tight areas. Recommend using a Dewalt 9" hand grinder with vacuum attachment.

### 2. Age of Concrete

Concrete must be a minimum of 30 days old for resinous flooring applications. Recommended finishing techniques for new concrete being prepared for ASPART-X application are wet cure or using a light steel trowel finish to minimize laitance and provide a hard surface.

### 3. Presence of Contamination

Previous contamination can affect the bond of the resinous flooring and must be removed. Types of contamination are oil, grease, or food fats. These can usually be burned off with a flame gun, or removed with a commercial degreasing compound or solvent.

### 4. Presence of existing coatings

Epoxies, paints and other laitance are best removed mechanically by diamond grinding, vacuum shot blasting, scarifying or sand blasting.

## CONCRETE REPAIR

Concrete surfaces must be structurally sound and free of cracks, chips and spalls. Any unsound or damaged areas must be repaired prior to proceeding with the resinous installation.

### 1. Crack repair

- Clean the area of debris and contaminants such as oils, loose materials, dirt, rubber, etc., that would act as a bond breaker. To clean spalls and cracks, use a "**Crack Chaser**" or "**Twisted Wire Wheel**". This rapidly cleans the concrete and speeds the preparation process. **Do not** use a straight wire wheel – this type of wheel will deposit metal on the surface of the concrete and polish the concrete, resulting in poor bonding properties.
- Fill with LINE-X MEND-X (refer to MEND-X technical data sheet for directions), and grind smooth.

### 2. Chips and holes

- For best results, expose clean, rough concrete. All dust must be removed. If using a dry diamond saw to cut concrete and clean the crack, remove all the dust from the sides of the cut. Use acetone (or other suitable material, i.e. alcohol) to remove all dust. Make sure the area is dry before proceeding with the repair.
- Fill with LINE-X MEND-X (refer to MEND-X product data sheet for directions) and grind smooth

## MOISTURE TESTING

- Always test for moisture! Coating system bond failures caused by moisture vapor transmission are the industry's largest single problem, and result in extreme frustration from owners, clients, and contractors. **LINE-X** recommends testing for moisture vapor transmission using a **Tramex Concrete Encounter Moisture Meter model # CME 4** or equivalent. Acceptable readings are less than 2%, and the maximum relative humidity should be below 80%.

Other recognized test methods are:

- **ASTM-F-1869** – *Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Sub floor using Anhydrous Calcium Chloride*: The maximum allowed water/vapor transmission rate is 3 pounds per 1000 ft per 24 hours.
- **ASTM D-4263** – Plastic Sheet Test. This test only gives an indication that moisture may be present and should never be used as a basis for decision.
- Test for moisture vapor transmission as prescribed above prior to resinous flooring application.
- Apply a moisture vapor transmission reduction system where moisture content is too high for successful resinous flooring applications.