



## **WORK GUIDELINE No. 4**

### **Adhesive and protective coat**

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## 1 Purpose and scope

The purpose of the adhesive and protective coat is to ensure a perfect and durable adhesion of the repair material (mortar, concrete) to the substrate.

SINIT adhesive and protective coat L.A. 2S (Epoxy Liquid Adhesive 2S) shall be applied to surfaces to which cement mortar will be subsequently applied and to surfaces which roughness is insufficient (less than 5 mm). Surfaces resulting from a water-jet preparation, enjoy a rough texture thus no adhesive coat is required for subsequent mortar application by mechanical equipment. In such a case surfaces must be saturated with fresh water.

## 2 Reference documents

Technical Data Sheet Adh/3 for L.A. 2S (Epoxy Liquid Adhesive 2S)

## 3 Preliminary conditions

For surface preparation, see Work Guideline no. 2.

Before applying L.A. 2S (Epoxy Liquid Adhesive 2S) to concrete surfaces the following conditions shall be fulfilled:

- The personnel employed to apply the adhesive and protective coat shall be trained in detail on the material preparation and properties and shall be instructed in all requirements related to the adhesive coat application;
- Both reinforcement and other steel elements to be protected from corrosion shall be clean, degreased, dry and free of rust and any other contaminants material. SA 2 ½ degree (commercial blast) for blast cleaned and ST 2 for manually cleaned surfaces are the minimum requirements;
- Concrete surface to be coated with adhesive coat shall be free of loose parts, oil and grease, clean and dry;
- During the adhesive coat application the minimum ambient and substrate temperature shall be between 5°C and 35°C.
- Mixing ratios of A and B components, either by weight or volume, shall be in strict accordance with the manufacturer's instruction indicated in the Technical Data Sheet;
- Mixing of components shall be carried out by a drill with helical mixer;
- During curing the adhesive coat must not be exposed to rain. In case that the coat is damaged by the rainfall, it shall be removed by sand-blasting or steel brush and replaced with new one;
- Adhesive coat must be applied within the pot-life time;
- No water or solvent shall be added to the adhesive coat;
- At the construction site, the adhesive coat must be kept away from direct sun and stored in a room. The storing temperature shall be between 5 °C and 35°C. Only cans containing the same components may be piled up.

## **4 Handling and health protection measures**

Skin contact shall be avoided by wearing impervious gloves (rubber or disposable polyethylene), and by using suitable goggles for eyes. Barrier creams such as Kerodex No. 7 may also assist in affording additional protection. Any accidentally contaminated skin areas shall be immediately cleansed with soap and water, and/or suitable resin removal cream. For eyes, flush with plenty of water and get medical treatment as soon as possible. The use of solvents to cleanse the skin shall be avoided.

## **5 Inspection**

The inspection concerning preparation and application of protective and adhesive coat shall be performed by the Engineer, Supervisor and Contractor's site representative.

## **6 Instructions for adhesive coat preparation and application**

### **6.1 Technical information**

See SINIT Technical Data Sheet Adh/3 for L.A. 2S (Epoxy Liquid Adhesive 2S)

### **6.2 Material preparation**

See SINIT Technical Data Sheet Adh/3 for L.A. 2S (Epoxy Liquid Adhesive 2S)

### **6.3 Application**

See SINIT Technical Data Sheet Adh/3 for L.A. 2S (Epoxy Liquid Adhesive 2S)

In areas where the application of repairing mortar is foreseen, reinforcement shall be protected with L.A. 2S applied in one/two coats with a consumption rate of 0.250 – 0.450 Kg/m<sup>2</sup> depending on surface conditions.

The prepared protective coat shall be applied to clean and dry reinforcement by brush or spray. Special attention shall be paid to a thorough and complete protective coat application behind the steel reinforcement.

Remove by brush any sagging.

Overcoating between 1 and 12 hours, depending on temperature.

If the cement mortar can not be applied on the freshly applied L.A.2S (tacky conditions), the freshly applied L.A. 2S shall be strewed with dry silica sand (0.3 – 0.8 mm) to improve the adhesion of the cement mortar to be applied later on.

All the protective coats shall be applied in uniform thicknesses.

Before applying the protective and adhesive coat shall be verified whether surfaces have been prepared in compliance with criteria indicated in chapter 3.

The adhesive coat can be applied, in a uniform thickness, by brush, roller or spray techniques with a consumption varying from 0.250 to 0.450 kg/m<sup>2</sup> depending on surface conditions.