



TSIRCON CO LTD

MANUFACTURERS & TRADERS
OF BUILDING MATERIALS

Ημ. έκδοσης 3/2007

TSIRCO-RES 481

Water dispersible protective coating and primer

A Chemically resistant epoxy coating suitable for application in both dry and very damp conditions

Product: Water dispersible, chemically resistant coating for the protection of concrete and metals.

Composition: A solvent free epoxy resin.

Purpose: An easy-to-apply protective coating of high chemical resistance, specially designed to emulsify and cure even in the presence of water. Also suitable for priming damp surfaces which are to be treated with other coatings requiring dry conditions e.g. TSIRCO-RES 401, 403, 405. TSIRCO-RES 481 may also be used as an admixture to cementitious mortars to improve their mechanical properties and make thin screeds possible to apply.

Usage: 4kg of TSIRCO-RES 481 will treat approximately 20m² of fair-faced concrete with a single coat.

Pack: 4kg.



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Introduction: TSIRCO-RES 481 Protective Coating is a solvent free epoxy resin specially formulated to be water dispersible thus enabling its application as a protective coating on wet concrete and metal surfaces. The product does not contain any organic solvent therefore can be applied by airless spray even in closed areas. TSIRCO-RES 481 has excellent adhesion qualities on concrete and metal both in wet and dry conditions and is also highly resistant to weathering, chemicals, oils, grease and petrol. The product has very low toxicity and the equipment can be easily cleaned with water. When used as an admixture TSIRCO-RES 481 increases the flexural and tensile strength of cementitious mortars and reduces dusting and moisture absorption.

Properties:

Colour: Pale Straw.

Pot life: 1 hour at 20°C, 8 hours at 5°C.

Curing time: Tack free in 8 hours at 20°C. 7 days for full chemical resistance.

Temperature range: In application from 5°C to 30°C.

In service from -20°C to 45°C.

TSIRCO-RES 481 is Chemically resistant to:

- Brine
- Kerosene
- Xylene
- Fuel oil
- Hydraulic fluid
- And Others

Information on other chemicals will be given on request.

Where to use:

A. AS A COATING

1. Preparation

Prepare surfaces to be treated with TSIRCO-RES 481 following the instructions given in the General Information Sheet on How to use Epoxy Resins. Special attention must be given to any blowholes or other surface defects, which must be repaired before applying the coating. It is very important that the surfaces to be treated are sound and smooth, enabling the application of a continuous and uniform layer of coating.



2. Mixing

TSIRCO-RES 481 Protective Coating comes into two separate components, the BASE resin and the HARDENER, which must be mixed together. The two components are supplied pre-weighed in correct proportions. To mix them, pour the BASE into the can containing the HARDENER and stir thoroughly using preferably a mechanical stirrer, such as an electric drill with a stirrer attachment, until the material obtains uniform consistency. If the product is to be applied by spray, water may be added up to 10% while mixing, in order to obtain a more spray-able consistency.

3. Application:

(i) **As a coating:** Apply the product with a brush, roller or airless spray. A second coat should follow in the same way within 18 hours.

(ii) **As a primer for other coatings:** The concrete surface must be dampened and one coat of TSIRCO-RES 481 should be applied using a stiff brush. Before applying the overcoat, the milky appearance of TSIRCO-RES 481 must be allowed to disappear.

Coverage: As a general guide, allow 0.2kg/m² per coat which normally yields a final coating thickness of 0.2mm/coat. This dosage may vary slightly depending on the texture and porosity of the surface to be treated.

Cleaning: Tools can be cleaned with water before the coating sets. Otherwise you may use TSIRCO-RES EPOSOLV.

Curing: TSIRCO-RES 481 Protective Coating will obtain sufficient hardness to allow light traffic within 16 hours after application, provided the ambient temperature is over 5°C. For full abrasion and chemical resistance allow at least 7 days.



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B. AS AN ADMIXTURE

Mix the dry components of cementitious mortars (cement and aggregate) to the proportions required, ready to receive the admixture.

Mix TSIRCO-RES 481 with the gauging water and add it to the mixed dry components.

Recommended Proportions: Approximately 2kg of TSIRCO-RES 481 will be sufficient for 35kg of mixed dry material. May use higher dosage of TSIRCO-RES 481 for thin screeds, e.g 2kg of TSIRCO-RES 481 per 28kg of dry materials. To achieve the required consistency, add clean water.

Handling Precautions: TSIRCO-RES 481 is an Epoxy Resin and protection is essential during handling to avoid skin irritation. For detailed recommendations you may consult the TSIRCO-RES SAFE HANDLING GUIDE.

How to Specify: All surfaces indicated should be prepared and treated with one/two coats of TSIRCO-RES 481, strictly in accordance with the instructions of the manufactures TSIRCON CO LTD.