



**TSIRCON CO LTD**

MANUFACTURERS & TRADERS  
OF BUILDING MATERIALS

Ημ. έκδοσης 8/2010

# TSIRCO-FLOPROOF 2

## Concrete waterproofer

### Product

TSIRCO-FLOPROOF 2 is an economical waterproofing plasticising admixture with controlled air entrainment, suitable for use in mass or reinforced concrete.

### Composition

Brown liquid based on selected lignosulphonates, containing air entrainment controlling additives.

### Purpose

To obtain concrete of higher density and lower absorption.

### Usage

The product is supplied ready for use. 0.25 litres of TSIRCO-FLOPROOF 2 is sufficient for dosing 50kg of cement.

### Pack

20, 210 litre drums and delivery in bulk.

### Advantages

- **Superior Quality:** TSIRCO-FLOPROOF 2 improves the plasticity and cohesion of concrete mixes allowing easier placing, better compaction and better finishing.
- **Watertight Structures:** TSIRCO-FLOPROOF 2 decreases the overall permeability of concrete.
- **Increased Durability:** Better protection of steel reinforcement and higher resistance to frost. The strength of concrete is maintained and improved.

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## Introduction

All concrete structures can be penetrated by water not only through the joints, but also through the pores, created in the concrete by the evaporation of excess water not taken up by the hydration of cement. The penetrating water may cause corrosion of the steel reinforcement leading to spoiling or, in the case of mass concrete, renders and screeds, it may cause serious damage by alternate freezing and thawing. The penetrating water may also carry deleterious substances or atmospheric impurities, which will cause damage in depth to the structure due to chemical attack.

TSIRCO-FLOPROOF 2 is specially formulated to protect against deterioration of concrete by reducing the permeability and water absorption of the mass.

## Use

TSIRCO-FLOPROOF 2 can be used to achieve effective and permanent waterproofing of mass, reinforced and precast concrete.

## Properties

TSIRCO-FLOPROOF 2 is a brown liquid, based on selected lignosulphonates. It contains special air-controlling additives whose function is to regulate the air content of concrete mixes ensuring that no increase of air entrainment takes place when a mix is accidentally overdosed. The product does not contain calcium chloride.

TSIRCO-FLOPROOF 2 is compatible with ordinary or rapid hardening Portland cement and also with sulphate-resisting cement.

As a plasticiser it enables the production of a denser, hence less permeable concrete at any specified workability by simply reducing the water: cement ratio.

By entraining a controlled amount of air in the concrete (usually around 2%), TSIRCO-FLOPROOF 2 reduces the capillary suction of the concrete. The tiny air bubbles trapped in the concrete block the capillaries thereby reducing water absorption. At the same time, these air cells serve as pressure relievers protecting the pores from increased pressure during frost conditions. In this way the surface of the concrete is protected against frosty damage.

TSIRCO-FLOPROOF 2 will also increase the workability and cohesion of fresh concrete allowing easier placing plus better compaction and finishing. TSIRCO-FLOPROOF 2 does not cause any significant retardation of the set of a dosed mix provided no over-dosing occurs. The strength of concrete is also maintained since the decrease in the water requirement more than offsets the effect of the entrained air.



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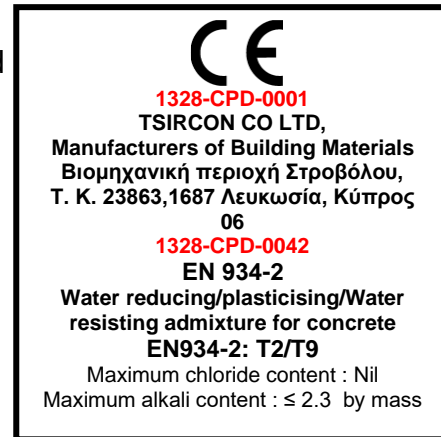
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### Typical Product Data

**Physical State:** Brown liquid based on selected lignosulphonates

**Specific Gravity at 20°C:** 1.09

**Application Standards:** It conforms to  
CYS EN 934-2:2009



### Dosage

TSIRCO-FLOPROOF 2 must be added to the mix together with the gauging water and sufficient mixing time must be allowed to ensure even distribution of the admixture throughout the entire batch. The dosage rate for TSIRCO-FLOPROOF 2 is 0.25 litres per 50kg of cement. According to British Standards Code of Practise C.P.2007 it is recommended that all waterproof concrete must have minimum cement content of 300kg per cubic meter of concrete. For proper dispensing equipment to be used with TSIRCO-FLOPROOF 2 we may offer advice on request.

### Storage life

TSIRCO-FLOPROOF 2 has a storage life of not less than one year. The product must be kept in the manufacturer's sealed containers and it must be protected from frost and direct sunlight, especially at high ambient temperatures. In case it becomes frozen, thawing must be allowed and thorough mixing must be made before use.

### Handling Precautions

TSIRCO-FLOPROOF 2 is an industrial chemical and ingestion should be avoided. The product has a slight acidity. Prolonged contact with skin should be avoided. Any splashes to the skin must be washed off with clean water. Also any splashes to the eyes must be washed off immediately with clean water and medical advice must be sought.

### How to specify

TSIRCO-FLOPROOF 2 shall be used strictly in accordance with the instructions of the manufacturers, TSIRCON CO. LTD.