

## TECHNICAL DATA SHEET

### **CRYSTOR**

*Cementitious Crystallization Waterproofer*

#### **PRODUCT DESCRIPTION**

**CRYSTOR** is a crystalline waterproofing formulation of selected blends of cement, very fine treated silica sand and various proprietary active chemicals providing a lasting imperviousness to water. **CRYSTOR** is a unique chemical treatment for the waterproofing and protection of concrete. In the presence of moisture, the active chemicals in **CRYSTOR** penetrate concrete and react chemically with free lime to produce insoluble crystals. This crystalline growth reduces porosity by blocking capillaries and filling hairline non-structural cracks caused by shrinkage or expansion.

#### **CUSTOMER BENEFITS**

- ready to use, easy to apply
- very economical
- for internal and external applications
- can be applied on green concrete
- can be painted over
- for use in contact with potable water
- effective treatment for hydrostatic conditions

#### **AREAS OF APPLICATION**

**CRYSTOR** can be applied on both new and old structures either on the water retaining side or on the negative side. **CRYSTOR** is recommended for the following typical applications:

- water treatment and sewage structures
- basement walls
- irrigation tunnels
- supporting walls and columns
- tunnels, manholes, silos
- foundation slabs inside underground garages

Remove existing coatings, smooth surfaces or laitance by acid etching, water blasting or sand blasting.

Structural defects such as cracks, faulty construction joints and honeycombing should be routed out to sound concrete and repaired with LEAK PLUG (see separate data sheet).

Saturate routed area and leave damp for application of **CRYSTOR**.

#### **MIXING**

##### **Slurry coat**

Mix 25 kg bag of **CRYSTOR** with 8.75 liters of clean water. Mix thoroughly with a slow speed drill equipped with a recommended mixing paddle until a creamy consistency is achieved. Allow the mix to rest for 15 minutes to allow for chemical reaction. It should then adhere to the brush without dripping. If mixture thickens, re-stir to reduce consistency. Do not add extra water.

#### **APPLICATION**

Prior to the application of **CRYSTOR**, saturate concrete surface with water to promote reaction. **CRYSTOR** slurry coat may be applied with a brush or broom. Be sure to work slurry well into openings, rough surfaces, joints and routed out areas.

Allow a time interval of 24 hours and moisten surface before applying second coat. Finish with final strokes in one direction.

##### **Dry shake for newly poured concrete:**

Use **CRYSTOR** as is, directly from the container. Wearing rubber gloves, distribute the powder evenly by hand, over freshly poured concrete 1.25 to 1.35 kg/m<sup>2</sup> per application before final trowelling works. It is best to distribute the powder at half the recommended rate in one direction, and the other half at a right angle to the first application.

#### **SURFACE PREPARATION**

Concrete surface to be treated must be clean and free of laitance, dirt, paint coating and other foreign matter.

Release the powder as close to the wet concrete as possible to prevent material from blowing away.

Two applications are recommended with a roughened finish on the first application providing adequate adhesion of the second application. Float slab and trowel to final finish.

#### **FINISHING**

When the last coat has stiffened, float it to desired texture with a sponge or wood float.

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#### **CURING AND PROTECTION**

Proper curing procedures are important to ensure the durability and quality of the coating. To prevent surface cracking, curing must begin as soon as the **CRYSTOR** coating has reached initial set. Moist curing using continuous water spray is recommended.

Keep **WATERGARD CRYSTOR** treatments moist and cured for a minimum of 48 hours by spraying surfaces with a fine mist of water three times a day for 2 – 3 days (under moist conditions). In warmer climates, more frequent spraying may be required.

#### **ESTIMATING DATA**

**CRYSTOR** slurry coat: 1.0 – 1.3 kg/m<sup>2</sup> per application by brush.

**Note:** Actual coverage rates will depend upon the profile and porosity of the substrate.

#### **PACKAGING**

**CRYSTOR** is available in 25 kg PE bags.

#### **STORAGE**

**CRYSTOR** should be stored in protected dry areas. The shelf life is 12 months in its original unopened packing in a cool ventilated place below 35°C in a shaded dry environment. Do not store in direct sunlight.

#### **PRECAUTIONS**

Do not use **CRYSTOR** over previous coated surface without proper surface preparation.

Freshly applied **CRYSTOR** treatment must be protected from extreme weather conditions such as rain or high temperature for a period of not less than 48 hours after application.

For water retaining structures **CRYSTOR** treatment should be cured for 14 days before filling with liquid.

#### **HEALTH & SAFETY**

**CRYSTOR** may contain chemicals that may cause irritation to eyes and skin. Goggles, face-mask, rubber gloves and long sleeves should be worn when using the product.

#### **FIRE**

**CRYSTOR** is non-flammable.