

# Technical Data Sheet

## ONDULIKIT OLC CRYSTAL

ONDULIKIT



OLC Crystal

### Product Definition

Cement based crystallized mortar in powder form activated by water and moisture. It is applied in positive and negative directions and the chemicals it contains penetrate into the concrete in depth by reacting with moisture and free lime present in the concrete, and form crystals that do not dissolve in capillary voids and pores.

**Composition:** Cement based, single component.

### Where to use and Properties

Can be used for waterproofing applications of ;

#### Positive water pressure

- Water tanks
- Swimming pools
- Foundations and foundation walls
- Irrigation canals,
- Concrete Pipes
- Dams
- Cisterns

#### Negative water pressure

- Interior waterproofing applications of foundations and foundation walls
- Exterior waterproofing applications of water tanks
- Retaining walls
- Tunnels and subways
- Floors and horizontal joints
- Lift Pits and elevator excavations

#### Effective in both positive and negative water pressure

- Integrates with the surface it is applied, penetrates into the surfaces and provides long lasting and complete waterproofing
- At each contact with the water, it fills the capillary voids of the concrete with its crystallized structure and provides impermeability
- Non-poisonous. Suitable for water tanks
- Dry sprinkle application is a very easy and effective method for waterproofing problems that take place in horizontal work joints
- Protects the concrete and reinforcement iron by preventing corrosion
- Air and water vapor permeable, allows the construction to breathe
- Can be applied on fresh concrete that has not set yet
- Resistant to freeze- thaw cycle

### Technical Data

Appearance	Grey or red colored fine powder
Density	~1,20 kg/lt
Mixture Rate	Slurry : 1 water / 2,25 – 2,50 OLC Crystal Trowel consistency: 1 water / 3,25- 3,50 OLC Crystal Mortar: 1 OLC Crystal/ 2 water to obtained trowel consistency
Water vapour permeability	Class I $S_D < 5$ (EN ISO 7783-2)
Capillary water absorption and water permeability	$w < 0,1 \text{ kg}/(\text{m}^2 \cdot \text{h}^{0,5})$ (EN 1062-3)
Water vapour permeability	$S_D < 5$
Resting period	3- 5 minutes
Pot Life	20 minutes
Application Temperature	Between +5°C and +35°C
Service Temperature	Between -20°C and +70°C
Reaction to fire	A1
Class of dangerous goods	Specification 5.3 favorable

### Accessories:

Brush and roller

### Packaging:

Package: **20 kg kraft bags**  
Qty/pallet : 60 bags  
Weigth/pallet : ±1.230 kg

### Storage – Expiry date

Protect from direct sun light, rain and frost. Can be stored for 12 months in its unopened original packages in dry places.

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### General Application Steps of ONDULIKIT OLC Crystal

1. Application surface must be cleaned from materials such as dust, oil, earth pitch, paint, silicon, curing material, detergent and molding oil which prevent bonding.
2. The weak parts of the surface must be removed, then cracks and gaps on the surfaces should become solid and smooth by using of favorable product from ONDUFIX Repair Mortars Product Group.
3. If needed, vertical and horizontal corners must be beveled or bevel strips can be used during the application.
4. The application surface must be saturated with water and must be kept dampy during the application. However excess water should be removed completely from the application surface
5. Add 10 lt of water for brush application or 7 lt's of water for trowel application to OLC Crystal slowly and stir preferably with a low speed (400-600 cycle/min) mechanical mixer until there are no lumps. Do not add any water or other liquids and powders. Leave the prepared mortar for 5 minutes and then stir for another 1 min and will start the application. The prepared mortar must be used within 20 minutes, if this duration is exceeded, the mortar should not be used.
6. There are 3 different types of application:

**1. Slurry :** ONDULIKIT OLC Crystal is applied with a trowel to the surface at least two layers and layers must be perpendicular to each other. Second layer must be applied before the first layer is completely dry approx. within 3- 4 hours.

**2. Mortar:** First layer of ONDULIKIT OLC Crystal can be apply by topping up 5-10 mm thick plaster for very old concrete, brick wall or briquette surfaces. The second layer ONDULIKIT OLC Crystal can be applied by applying a slurry consistency when applied on the first layer

**3. Dry Sprinkling:** Ondulikit OLC Crystal is applied by sprinkling in powder form on joint surfaces on horizontal surfaces in cold joints.

No matter which application method is applied, curing with water afterthe application is extremely important. After application, ONDULIKIT OLC Crystal should be prevented from drying out immediately. It is useful to spray water on the application surface or lay a moist bag for about a week.

Application methods preferred according to the building whether it is new or old.

#### 1. Applications in new buildings: slurry or dry spinkling

**a)** For the insulation of water coming from the floor, ONDULIKIT OLC Crystal can be applied just before casting of the floor concrete, by sprinkling it on the surface of the leveling concrete in powder form or applying slurry consistency. In this way, the application prevents the infiltration of water and prevents flooding of the floor. For the foundations water insulation should be done from the outer surface (from the direction of the water), if not possible application can be done from the inner surface.

**b)** It can be applied in cold joint applications caused by pauses between concrete pouring during construction, by sprinkling in powder form horizontally and as sherbet consistency in vertical.

#### 2. Application in old buildings: Slurry or Mortar

##### Foundation walls with water leakage or exposed to strong water pressure

**a)** If there is a strong flow of water on the surface, first of all, these holes are expanded with a drill to reduce the water pressure so that the water can flow freely

**b)** If the leakage is at more than one point, the water will flow through the lower parts of the wall.

**c)** If water pressure is high, place plastic pipes into the holes that are open on the application surface. If the water pressure is low , there is no need to use pipes

**d)** Apply ONDULIKIT OLC Crystal mortar to the whole application surface except the plastic pipes and holes. Wait 24 hours to curing the application.

**e)** After the application is finished except for the holes, the plastic pipes are removed and the holes are clogged with a mortar formed by mixing 3 - 4 parts ONDULIKIT OLC Crystal, 1 part ONDULIKIT OLC Crystal Hardener which is a complement of OLC Crystal. The mortar is pressed firmly with a gloved hand for 1 - 2 minutes until it hardens.

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- f) It is applied by adding ONDULIKIT OLC Crystal to the plaster when waterproofing on very old concrete, brick, briquette. ONDULIKIT OLC Crystal is a complete waterproofing, usually obtained after a period of 5-7 days before application.

### ONDULIKIT OLC Crystal Consumption

Product	Consumption
ONDULIKIT OLC Crystal	Slurry Positive water pressure: For 2 layers 1,00 - 2,00 kg/sqmeter Negative water pressure: For 2 layers 2,00 kg/sqmeter
	Mortar For 5 mm Thickness 2,00 – 3,00 kg/sqmeter
	Dry Sprinkling 3 kg/sqmeter

### ONDULIKIT OLC Crystal Warnings – Health and Safety

1. Avoid application in temperatures below +5°C and above +35°C.
2. Avoid application at frozen areas, areas under risk of freezing in 24 hours or areas open to direct sunlight or wind.
3. Do not add water or any other liquids or any other powder to the mixture.
4. Since water pressure accelerates crystal formation and penetration of ONDULIKIT OLC Crystal to concrete, structures such as water tanks should be filled with water, 24 hours after the final application of ONDULIKIT OLC Crystal. ONDULIKIT OLC Crystal is becoming waterproof, usually obtained after a period of 5-7 days after application. Soil filling is done at the end of this period.
5. Crystal formation and degree of penetration depends on the density of the concrete and the absorbency of the surface.
6. Do not contact metal and glass surfaces around the application surface. On these surfaces a permanent may cause staining.
7. Crystals occurred after the application could not be decorative surface. To prevent this, plaster should be applied on ONDULIKIT OLC Crystal while it is still wet and paint should be applied on the plaster. If ceramic application is to be performed, ceramic adhesive should be applied directly freshly applied ONDULIKIT OLC Crystal. If these applications are to be applied on cured ONDULIKIT OLC Crystal, the surface crystals should be wiped with diluted hydrochloric acid or bleach, then plastered. This wiping only destroys the crystals on the surface, does not damage the crystals penetrated into the concrete.

### General Warnings

- As with all chemical products, contact with food, skin, eyes and mouth should be avoided during usage and storage.
- If swallowed by accident, consult a doctor. In case of get in touch with skin, rinse with plenty of water. Must be stored out of reach of children.
- Think safety first. Wear PPE