

**Product Data Sheet  
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**CN2000® E&A (INJECTION)**

ISO 9001-2015– GB/

T1900-2000 CERTIFIED



**Manufacturer:**

ZHONGHE WATERPROOF MATERIAL CO. LTD.  
China

**International Distributor:**

**Kelso Coatings**  
405 Industrial Drive, Unit #14, Milton, ON L9T 5B1

Telephone: 1-905-281-3921

Toll Free: 1-866-544-0450 (Within North America)

Fax: 1-905-864-7389

E-mail: [info@kelsocoatings.com](mailto:info@kelsocoatings.com)

Website: [www.kelsocoatings.com](http://www.kelsocoatings.com)

## Cementitious Capillary Crystalline Waterproof Material

### Description:

The anticorrosion waterproofing material **CN2000 E&A** is a polymer cement composite grouting material. After mixing the liquid (E) and powder (A) materials in the designed ratio, **CN2000 E&A** properties will serve both volatile solidification and reaction solidification functions.

In order to stop water seepage through the concrete structures and cracks, we must determine where the leak is originating from and where to install the injection ports. Once determined and ports (with nipples) are installed; proceed with properly cleaning/flushing out crack via acid/water. After the crack is properly prepared and cleaned, **CN2000 E&A** is mixed and injected through the same ports. The liquid (E) material will react to the water and begin to expand inside the crack/structure to create a hydrophobic barrier. The solid (A) material in the liquid will ensure adequate seal through water plug crystallization.

### Applications:

- ✚ Repair cracks caused due to improper concrete pouring and, vibration, pinhole leaks, rock fissures, and pipe penetration seepage.
- ✚ Fills the gap between pre-embedded components and concrete.
- ✚ Seal joints between concrete dam and metal plates.
- ✚ Reinforces contact zones between concrete and surrounding rock.
- ✚ Blocks localized leaks in underground foundation projects, tunnels, subways, below grade chambers, mines, and waste water treatment facilities.
- ✚ Used as grouting material for prevention of collapse in tunnels prior to excavation.

**Advantages:**

The **CN2000 E&A** grout is a quick setting waterproof and anticorrosion material which is applicable to plugging of all cracks that contain water and require permanent sealing. The liquid material (**E**) is a macromolecular polymer which will react and expand quickly in the presence of water. The powder material (**A**) is a cement-based, inorganic, water-plug material with the ability to resist to long-term water seepage.

**Packaging:**

CN2000 E is stored in metal pail: 20Kg/Pail; CN2000 A is stored in plastic pail: 25Kg/Pail.

**Storage:**

**CN2000 E:** sealed, unbroken and stored within the original package in shade and dry condition within the temperature range 5°C - 40°C. The shelf life is 1 year.

**CN2000 A:** sealed, unbroken and stored within the original package in shade and dry condition within the temperature range -30°C - 40°C. The shelf life is 2 years.

**How to Use:****a) Drilling**

Drill 3/8" diameter holes alongside crack or construction joint on a 40-50 degree angle to intersect the crack. The spacing between holes can be determined based on the crack width and the port hole diameter. Alternate holes on each side of the crack. Flush holes using air to remove debris caused by drilling.

**b) Installing Injection Ports**

There are two types of injection port systems accepted for use:

1. Plastic Packers with grease nipples – Hammer plastic packers into drilled holes. Screw in self-threading nipples.
2. Mechanical Injection Ports with grease nipples – Place Steel Port inside drilled hole; proceed to tighten until secure using a wrench.

**c) Cleaning Crack**

Depending on crack width and leak activity, cleaning of the crack is required. Inject using a manual or machine pump through the injection ports. For hairline cracks pump 5% acid followed by pumping of clean water. For wider cracks only pumping of clean water is required. If the crack is leaking at a high rate, it can be assumed the crack is clean and clear of debris, and can proceed with our **CN2000 E&A** Injection without additional cleaning measures.

**d) Mixing Material**

Mixing ratio (ratio by weight): CN2000E : CN2000A= 1 : 1 [by weight] under normal conditions.

Pour the CN2000A into CN2000E and fully stir for approximately 3-5 minutes. Mix evenly by mechanical means leaving no visual signs of cementitious powder.

**e) Injecting Material**

Pump the **CN2000 E&A** material into the injection ports using a manual or machine pump. Be sure to use a different pump from your cleanout so you don't mix the injection material with water.

**Technical data:**

	<b>CN2000 E</b>	<b>CN2000 A</b>
<b>Condition</b>	liquid	Powdery
<b>Color</b>	Clear - Tan	Grey - white
<b>Smell</b>	Unpleasant	No smell
<b>Density (g/cm<sup>3</sup>)</b>	> 1	1.25-1.35(bulk density)

**Attention:**

- ✚ The best construction temperature conditions are within 20 ± 10°C. Avoid applying the material in dry and high temperature conditions (<5°C or >35°C). Do not proceed with use in temperatures under 0°C.
- ✚ The technician should be trained and familiar with the machine and installation procedure.
- ✚ CN2000 E is an organic polymer. During transportation and storage, this material should keep away from high heat and avoid freezing.
- ✚ The working condition of the pump should be checked prior to and regularly during injection.

**Safety**

This material contains cementitious content. Avoid contact with skin and eyes. Mask, gloves and eye protection should be worn when mixing the material. In the event material comes into contact with skin or eyes, wash the skin and eyes using clean water immediately. Contact the doctor if there are any persisting symptoms.

This material should keep away from children.

**CN2000<sup>®</sup> E&A - INJECTION  
Cementitious Capillary Crystalline Waterproofing****Warranty:**

**ZHONGHE Waterproof Material Co., Ltd.** warrants that the products manufactured comply with the national standard EJ/T 20070 - 2014, shall be free from material defects and will conform to formulation standards and contain all components in their proper proportion.

Should any of the products be proven defective the liability to **ZHONGHE Waterproof Material Co., Ltd.** shall be limited to replacement of the material proven to be defective.

**ZHONGHE Waterproof Material Co., Ltd.** shall in no case be liable for incidental or consequential damages.

If problems are caused due to violation of the use regulations, **ZHONGHE Waterproof Material Co., Ltd.** will not be responsible for the replacement of the product.