



# Crocodile Non-Ferrous, Non-Shrink Grout

Special High Compressive Strength and Provided a High Early Strength Hydraulic Grout



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Crocodile non-ferrous, non-shrink grout is a ready mixed cementitious non-shrink grout which provides a high early strength and special high compressive loading ability over 850 ksc at 28 days, good flowability and no bleeding. Suitable for machine installation, infrastructure, tunnel, dam, power plant, etc.

### Product Benefits

- Fill-up and eliminate concrete void.
- Typical applications include support structural elemental.
- Machine installation

### Product Features

- High compressive strength up to 850 ksc (at 28 days)
- No shrinkage and no bleeding
- Good flowability to fill narrow or intricate voids.

### Application

- Mega concrete construction
- Damp, water supply, power plant
- Major machine platform

**Color:** Grey



## **Application Instruction**

### **Surface Foundation:**

The substrate must be in good condition. Any incomplete concrete, dirt, form-oil, curing compound must be removed. All damage rebars must be treated and reinforced before placing (under control by professional engineer).

### **Pre-Wetting:**

It requires several hours of soaking or flooding for concrete substrate. In the condition of application with high density concrete, it may require longer damp time. All free water should be carefully released with instruction. The surface must be damp but dry (Saturated Surface-Dry, SSD Condition).

### **Formwork:**

All formworks should be planned and constructed to achieve the completed void fill-up. Be sure that there is enough area for continue placing and be aware of air release gap. Apply a suitable form-oil and seal all form-joints to protect the leaking.

## **Product Mixing**

### **Pure Mortars:**

The product should be mixed in a suitable mixer. Use a slow speed 400 - 500 rpm hand drill and paddle. In case of large work area use a high shear vane mixer. Drum mixers can't provide a sufficient result.

For reach the product capabilities, use clean water to mix with cement as recommended ratio in product technical datasheet. Continue mixing the product until it becomes homogenously, mix at least 3 minutes with consistency of mixer speed.

### **Micro-concrete:**

In case the thickness requirement is over 70 mm, it's able to add maximum 6.25 kg. of aggregate size 3/8 Inch (9 mm.) per 25 kg/bag of Crocodile Non-Ferrous, Non-Shrink Grout. Be sure that the aggregate must be immersed but not wet (Refer to SSD Standard for aggregate preparation.) Leave the mixed product for 2 minutes before placing.

### **Mixing Ratio:**

Crocodile Non-Ferrous, Non-Shrink Grout 25 kg/bag per clean water 3.125 – 3.375 liter (12.5% - 13.5%)

Micro-concrete mixing: Adding 25% (6.25 kg) of aggregate size 3/8" for micro-concrete when the depth of placement is over 70 mm.

## **Placing**

For gaining the maximum benefits of non-shrink grout, the temperature during the placing process must concerned as an important factor to the product properties development during its setting period. At 25°C the mixed product must be placed within 20 minutes for fully expansion process. Planning of mixed product amount for continue placing until fill-up all the gap or void.

Placing the mixed product on one side of the void to eliminate air or remain pre-wet water becoming trapped under the baseplate.

In case of under plate grouting, if there are any bolt-pockets must be grouted in prior state then continue grouting between the substrate and the base plate. It is recommended to set the position of head placing across the shorts distance of flowing direction.



### Curing

Curing process is very important for prevent cracking and development of the product to reach its compressive strength and others property. To complete the product setting process, the exposed areas should be toughly cured. This is able to be done by plastic sheet the continuous application of water and/or cover with wat hessian cloth. Continue curing process until release the form. It is recommended to use Crocodile Admix Cure applied on all grouting surface for complete product curing time.

### Cleaning

Clean all tools with water right after use.

### Estimated Coverage:

Crocodile Non-Ferrous, Non-Shrink Grout approximately 1,900 kg. (76 bags)/ m<sup>3</sup>

### Technical Data

Density	2.14 kg/liter
Bleeding: ASTM C232	0%

Status	Plastic	Flowable
Water : Cement Ratio	12.5%	13.5%
Change in Height at Early Age: ASTM C827	0.65%	0.51%
Setting Time: ASTM C191		
Initial	38 min	1 hr 16 min
Final	3 hr 45 min	3 hr 50 min
Compressive Strength: ASTM C109		
1 day	>500 ksc	>500 ksc
3 days	>600 ksc	>550 ksc
7 days	>700 ksc	>650 ksc
28 days	>850 ksc	>700 ksc

\* The above result is an average value from laboratory testing control of ambient temperature, mix-ratio, mixing time and others condition which affect to the product properties.

\* Under laboratory condition at 21 °C - 25 °C



### **Recommendation**

- Wet curing Immediately after completion of work. Allow curing 3-7 days.
- Do not add more water. Excess water will affect the mechanical properties such as the decreasing of compressive strength and flexural strength. But the shrinkage will increase.
- Ensure the substrate must be strong and firm, and has been properly prepared in accordance with ICRI Guideline 310.2R.

### **Caution**

- This product contains Portland cement and chemical additives that may cause skin and eye irritation.
- Wear appropriate personal protective equipment during application, such as gloves, dust masks, and safety glasses.
- In case of eye contact, rinse immediately with plenty of clean water and seek medical attention.
- Avoid direct contact with the product and wash hands thoroughly after use.
- Keep out of reach of children.

### **Storage**

- Store in a shaded, dry, and well-ventilated area. Storage in high-temperature conditions may adversely affect the product's shelf life.
- The product has a shelf life of 1 year from the date of manufacture when stored under proper conditions.

### **Packaging**

Packaging: 25 kg/bag

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