



# Crocodile HS Grout

## High Early Strength Hydraulic Grout



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Crocodile HS Grout can reach strength up to 40 MPa within 8 hours, and more than 60 MPa in 28 days. It has high flowable and self-compacting can be filled all void without vibrating. No water-bleeding, no shrinkage. It is designed for grouting of heavy-duty equipment, Crane rail grooves in ports and docks, Rail clips grouting, railway sleeper, Base plate, Bolt fixing, etc.

### Product Features

- Develop strength up to 40 MPa within 8 hours.
- High flowable, do not need vibrate.
- No water-bleeding
- No shrinkage-no cracking

### Application

- Grouting rail (Plinth) of high-speed train
- Grouting heavy-duty machine
- Grouting precast concrete column
- Base plate and bolt anchorage
- Bridge support
- Voids

**Standard :** GB/T50448, TB/T2331, TB/T3320

**Color :** Gray



### **Application Instruction**

#### **Substrate Preparation**

- Ensure, the substrate must be strong and firm.
- Substrate must be cleaned by water. Free from oil, grease or any loosely adherent material.
- Wet the substrate several hours prior to grouting, the area of cleaned foundation must be flooded with fresh water. Immediately before grouting takes place, any free water should be removed.
- Base plate and bolt must be clean and free from oil, grease scale or paint. Air pressure relief holes should be provided to allow venting of any isolated high spots.
- The formwork should be constructed to be leakproof. This can be achieved between joints by using sealant.

#### **Mixing Ratio**

Water : Crocodile HS Grout = 13%

Water 3.25 Liters : Crocodile HS Grout 1 bag (25 kgs)

#### **Mixing**

- Use clean water or drinking water with the amount as the above recommendation.
- Prepare 90% water of total required quantity into mixer. Turn on the mixer and slowly pour Crocodile HS Grout. Stir for 2 minutes.
- Add 10% of retention water and mix for 30 seconds. It is recommended to use a mechanical stirrer with speeds between 500-1,000 rpm.
- Coarse aggregate (if needed) should be cleaned, before adding to mix.
- Do not add other additives.
- Should be used within 30 minutes. Do not add more water to the mixed material paste.

#### **Application Method**

- The area of the cleaned foundation must be wet with water until saturated.
- Using the mixed Crocodile HS Grout within 30 minutes to gain full benefit of the expansion process. Maximum thickness must be not over 50 millimeter in a single layer. Coarse aggregate (size 3/8 inch or 9-10 millimeter) can be added up to 30% by weight (7-8 kg aggregate per 25 kg grout) when formwork depth more than 50 millimeter.
- Wet or moist the casting places after set for 3-7 days.
- Protect the area from vibration, heat, and temperature shock during the first 24 hours.

#### **Estimate Coverage**

- Crocodile HS grout 1 bag (25 kg) / 0.014 cubic meter
- Crocodile HS grout 72 bag (25 kg) / 1.00 cubic meter

#### **Tool Cleaning**

- Cleaning tool by water



### Technical Data

Test Method	Standard Value	Result
<b>Open Time</b>		30 minutes
<b>Flowability</b>		
Initial	$\geq 320$ mm	$\geq 350$ mm
30 minutes	$\geq 240$ mm	$\geq 300$ mm
<b>Setting Time</b>		
Initial	$\geq 38$ minutes	40 minutes
Final	$\leq 180$ minutes	60 minutes
<b>Compressive Strength</b>		
8 hours	$\geq 20$ MPa	$\geq 40$ MPa
1 day	$\geq 40$ MPa	$\geq 60$ MPa
28 days	$\geq 50$ MPa	$\geq 70$ MPa
56 days	$\geq 50$ MPa	$\geq 70$ MPa
<b>Flexural Strength</b>		
1 day	$\geq 10$ MPa	$\geq 11$ MPa
28 days	$\geq 10$ MPa	$\geq 11$ MPa
<b>Expansive Rate</b>		
28 days	0.02-0.1 %	0.02-0.03 %
<b>Modulus of Elasticity</b>		
28 days	$\geq 30$ GPa	$\geq 30$ GPa
<b>Bleeding rate</b>	0	0

\* According to TB/T2331 and TB/T3320 standard test method.

**Recommendations**

- High environmental temperature might shorten bucket life and open time of products. Using cool water to prevent this case.
- 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.
- Minimum thickness of Crocodile HS Grout must be more than 10 millimeters per layer.
- Wet curing Immediately after completion of work. Allow curing 3-7 days.
- Crocodile HS Grout is a moisture sensitive product. Moisture will degrade the product's shelf life.

**Caution**

- Recommend using rubber gloves, dust masks, eye glass and personal safety equipment.
- Apply with good ventilation. Do not inhale product.
- In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice.
- Keep away from children.

**Storage**

- Keep in a cool, dry area, storage temperature should be 0 - 35°C.
- Place with prevent direct sunlight.
- Shelf life for 6 months since manufactured date.

**Packing**

Net weight : 25 kg

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