

FERROGROUT



Ready Mixed Non-Shrink Metallic Cementitious Grout

specification for packaged dry, hydraulic-cement grout (non-shrinkable), at a flow-able consistency.

DESCRIPTION

FERROGROUT grout is a specially prepared, ready-to-use, non-shrink metallic grout. It is formulated for use at any consistency from fluid to damp-pack for grouting machines or plates requiring non-shrink, high-strength precision bearing, including machine bases subject to thermal movement.

USES

- Machinery and equipment requiring high strength, maximum bearing, impact resistance, non-shrink precision grouting such as crane rail plates, rolling, stamping, drawing and finishing mills for the steel and aluminum industries.
- Paper machine soleplates, included hooded dryer sections.
- Turbines, generators and centrifugal compressors.
- Applications where shrinkage must be eliminated to achieve maximum load and bearing transfer.
- Anchor bolts and rods.

ADVANTAGES

- Ready-to-use grout.
- Hardens free of bleeding, settlement or drying shrinkage when mixed, placed and cured at any consistency – fluid, flow-able, plastic or damp-pack.
- Non-shrink, dense grout that contains no gas-generating or air-release agents, such as aluminium powder, fluid coke, and others.
- Withstands thermal movement and other effects caused by combination of heating / cooling and wetting / drying.
- Contains ductile metallic aggregate that provides higher strength and increases impact resistance under dynamic and repetitive loading.
- Strength without vertical confinement – no cutting or capping of unconfined shoulders required.

SPECIFICATION / COMPLIANCES

Meets the performance requirements of ASTM C-1107, Grades A & B as well as Grade C, combination volume adjusting grout standard

TECHNICAL INFORMATION

Consistency			
	Plastic	Flow-able	Fluid
Age	Strength Mpa	Strength Mpa	Strength Mpa
3 days	41	31	21
7 days	55	41	34
28 days	69	55	42
Plastic: 95% flow on flow table ASTM C 230, 5 drops in 3 seconds.			
Flowable: 130% flow on flow table ASTM C 230, 5 drops in 3 seconds.			
Fluid: 20 to 30 seconds flow by Corps of Engineers Flow Cone Method CRD C-611-80			

NOTE: The data shown is based on controlled laboratory tests. Reasonable variations from the results shown above can be expected

SHELF LIFE

2 years in original, unopened package.

PACKAGING

FERROGROUT is packaged in 25kg bag.

DIRECTIONS FOR USE

Careful preparation is vital to the ultimate success of every grouting application.

If the contractor is not familiar with standard grout placement techniques, a pre-job meeting is suggested to review the project details unique to the particular job.

Grouts generally work best at 50°-80°F (10°-27°C). Cold weather retards strength gain and set time. Hot weather accelerates setting time and causes premature drying of the grout. Provide heating or cooling, as necessary, to compensate for extremes in ambient temperatures and resulting variations in cure time.

At 25°C place the grout within 15 minutes of mixing to gain full benefit of the expansion process.

FERROGROUT can be placed in thicknesses up to 100 mm in a single pour when used as an under plate grout. For thicker sections it is necessary to fill out **FERROGROUT**

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with well graded 10mm, silt free aggregate to minimize exothermic. If bulking with aggregate is used the ratio shall not exceed 1:1. The properties of a bulked grout will differ from those published in this data sheet.

Any bolt pockets must be grouted prior to grouting between the substrate and the base plate. Continuous grout flow is essential. Sufficient grout must be prepared before starting. The time taken to pour a batch must be regulated to the time taken to prepare the next one. Pouring should be from one side of the void to eliminate any air or pre-soaking water becoming trapped under the base plate. It is advisable to pour the grout across the shortest distance of travel. The grout head must be maintained at all times so that a continuous grout front is achieved.

Where large volumes have to be placed **FERROGROUT** may be pumped. A heavy duty diaphragm pump is recommended for this purpose. Screw feed and piston pumps may also be suitable.

SURFACE PREPARATION

Surfaces to be grouted should be clean and free from rust, grease or oil. Determine work schedule and method of placing grout, then prepare strong, properly braced and oiled forms to retain the grout and provide relief holes, if needed.

Concrete foundations and / or members should be saturated with water for 24 hours prior to grouting. Just before placing the grout, remove free water from the surface of the foundation and holes using rags, compressed air or a siphon. In those situations where bond is not required, concrete surfaces may be coated to prevent absorption of water from the grout by the concrete.

MIXING & YIELD

The strength of the grout is often the determining factor in deciding how soon the machine or equipment can be put into operation. Strength is dependent on the amount of mixing water used, temperature of the base plate and foundation, curing, and age of the hardened grout.

One 25 kg bag of **FERROGROUT** grout mixed with 4 liters of water provides approximately 12 liters of grout. More or less water may be used to meet consistency requirements, thus increasing or decreasing the yield.

To have a homogenous mix water should be accurately measured and gradually added to **FERROGROUT** continue to mix for 5 minutes.

CURING AND SEALING

Proper curing procedures are important to ensure the durability and quality of the grout. Cure the grout with a high solids curing compound, such as **HARDOCURE WB** compound must be ordered separately. Improper curing can cause minor cracks on outer layer and minimize the ultimate strength.

CLEAN-UP

Clean tools and equipment with water before the material hardens.

PRECAUTIONS / LIMITATIONS

Ambient temperature of the bedplate, foundation and grout should be in the range 7° C - 24° C. **Do not use water in an amount or at a temperature that will produce a flow of less than 20 seconds or cause mixed grout to bleed or segregate.**

HEALTH & SAFETY

FERROGROUT is alkaline and should not be allowed contact with skin and eyes. Avoid inhalation of dust during mixing by wearing dust masks. The use of gloves, eye protection and dust masks is advised. Immediately wash with water in the event of contact with skin. Splashes into eyes should also be washed immediately with plenty of clean water and medical advice sought.