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Installation Guide

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MasterFlow 668 Technical Data Guide

MasterFlow® 668

Epoxy chock grout for mounting equipment

HOW TO APPLY

BASE-GROUT POUR

1. The base grout pour should cure sufficiently before the chock grout application.
2. The base pour should be free of any oil, water, or other contamination and wiped with solvent.
3. Allow the base grout to cure 16–24 hours before proceeding

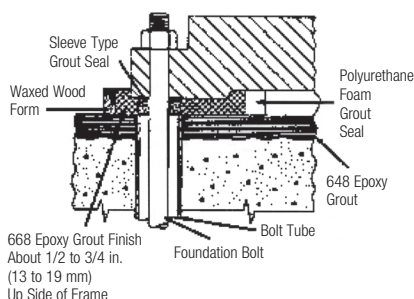
CHOCKING DIRECTLY TO CONCRETE

1. Cure the foundation until design strength of the concrete is achieved and foundation is dry. Use the recommended procedure according to ACI 351.1R, Grouting Between Foundations and Bases for Support of Equipment and Machinery.
2. The surface to be grouted must be clean, strong, and roughened to a CSP of 5-9, following ICRI Technical Guideline No. 310.2 to permit proper bond. Do not use a bushing hammer.
3. Seal the exposed concrete outside the chock area with an oil- or chemical-resistant coating.

CHOCKING STEEL TO STEEL

1. Both steel surfaces should be free of oil, water, or other contamination.
2. Ideally, both steel surfaces should be sandblasted to white metal. Other mechanical methods, such as grinding and sanding, are also effective but do not produce a bond strength as high as sandblasting.
3. When a permanent bond is not desired, apply a thin layer of mold release agent to one of the steel surfaces to prevent bond of the grout to the steel.

FORMING EPOXY CHOCK



1. Typical epoxy chock thickness should be from 2–3" (51–76 mm).
2. Form a 2" (51 mm) shoulder for proper pouring and grout head.
3. Top of form must allow grout to rise at least $\frac{3}{4}$ " above the bottom of the base being grouted.
4. Apply adhesive foam tape to the vertical edge of the steel frame to allow for thermal expansion of the equipment.
5. Open-cell polyurethane foam is generally used under the frame. When using foam, take precautions to properly support it. The foam should have a minimum width of 2" (50 mm) and a depth 1–2" (25–50 mm) larger than required for the chock. Compression will hold the foam in place. The form area outside of the frame (shoulders) should be approximately 2" (50 mm) in width to allow for placement of the grout and at least $\frac{3}{4}$ " (19 mm) above the bottom of the base.
6. The shoulder pouring area can be formed with foam, steel, or wood. The foam must be supported so the forms do not break during the pouring operation. Contact adhesive and caulk can be used to seal any joints or edges. The forms must be liquid tight.

7. Coat the steel, wood, or foam with paste wax to allow for easier removal.

MIXING

1. Aggregate must be completely dry.
2. Precondition all components to 70° F (21° C) for 24 hours before using.
3. Pour the hardener (Part B) into a pail of grout resin (Part A) and stir by hand, using a spatula or paint stirring paddle, until well mixed to a uniform amber color.
4. Pour the mixed liquids into a horizontal shaft mortar mixer or a Kol type mixer without delay.
5. Add the grout aggregate and mix only until aggregate is completely wetted out to avoid air entrapment. Caution: Always add aggregate to the mixer after the premixed liquids have been poured in.
6. Pour the grout into a wheelbarrow or buckets for transporting to pour-site. Remove it from the wheelbarrow within 10 minutes.

PLACEMENT

1. When pouring chock grout, pour on one side of formed chock to minimize air entrapment. Trapped air should pass through the open-cell foam, resulting in no air voids. Once the chock grout has been started on one side, keep the level of grout filled above the equipment base.
2. MasterFlow 668 is flowable but can be helped by the vertical movement of a banding strip in the open form area. Do not vibrate. Low foundation temperatures decrease flowability.
3. Where grout cannot be adequately worked to fill the grout cavity because of its large size or limited space, a head box will greatly assist flow. A sturdy wooden box or sheet-metal funnel about 6–12" (152 to 305 mm) deep may be used.

4. Check for leaks. Leaks do not self-seal. If not stopped, they will cause voids.
5. The grout should always have a minimum of ¾" (19 mm) head in the open form during pouring and cure.
6. After the pour is complete, clean the mixer and tools with acetone, MEK, or lacquer thinner. Exercise caution when using flammable solvents for cleaning.

CURING

1. Remove jack screws and place equipment in operation when design strength of the grout has been achieved.
2. The grout will not harden below a temperature of approximately 35° F (2° C).
3. Water will inhibit the cure and strength of the grout; protect it from rain until it hardens.

COLD-WEATHER CURING

1. The foundation and the equipment base will probably be cooler than room temperature unless room temperature has been consistent for some time. Thus, the foundation and engine temperatures must be used in estimating cure time.
2. Temperatures vary so radically (day vs. night, atmospheric vs. metal surface) that field judgment must still be used as the final measure. When struck with a hammer, cured grout should have a solid, almost metallic feel. Be sure to check as close to the base of the equipment as possible.

WORKING TIME

The following chart is a guide for the working time of a fresh grout mix at various ambient temperatures.

The working time of a MasterFlow 668 grout mix begins when the hardener is added to the resin.

Working Time

TEMPERATURE, °F (° C)	MINUTES
90 (32)	50–60
70 (21)	90–120
50 (10)	120–150

The above working times assume product has been properly conditioned for cold or hot weather use.

Do not let mixed resin and hardener stand without adding aggregate.

HOT-WEATHER GROUTING

1. Avoid high temperatures while grouting in the summer. High ambient temperatures will increase the heat generated during cure and decrease the working time.
2. If the packaged grout is above 90° F (32° C), chill the sealed pails of grout in a tub of water or cover the pails with water-soaked burlap.
3. Provide shade from summer sunlight for at least 24 hours before and 48 hours after grouting.

COLD-WEATHER GROUTING

1. Temperatures below 60° F (16° C) make the grout stiff and hard to handle and significantly increase the cure time. The baseplate and foundation may be much cooler than room temperature. In cold weather, store materials in a warm place. For best handling, the grout components should be at least 70° F (21° C).
2. When baseplate and foundation temperatures (measured by a contact thermometer) are less than 50° F (10° C), the grout may be so stiff it will not readily flow. The length and depth of the grout pour also determines the flowability, so heating of the area may be necessary, depending on field conditions.

3. If heating is required, construct an enclosure (typical materials are polyethylene or canvas) around the equipment and foundation being grouted. Forced air or infrared heaters may be used to obtain the necessary heat to increase the baseplate and foundation temperatures above 50° F (21° C). Apply heat 1 – 2 days in advance of grouting to achieve uniform baseplate and foundation temperatures. Avoid exposure to exhaust from heating equipment. Remove heat during grouting placement.

FINISHING

A smooth finish may be obtained by spraying or brushing the surface with mineral spirits. Obtain best results by smoothing the surface several times just before the grout surface hardens.

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