

SAFETY PRECAUTIONS FOR THIS EPOXY

1. PRODUCT DESCRIPTION

This product is a two-component epoxy compound intended for industrial use only. This epoxy is composed of a "part A liquid resin" and a "part B liquid hardener". When A and B are combined in a certain ratio, they react chemically. This reaction results in strong fumes, high heat buildup, and eventually a cured solid.

2. BASIC SAFETY PRECAUTIONS

This epoxy is a chemical and should be handled carefully. Keep away from children, pets, and people not directly involved in its use. Always work in a clear, obstacle-free area to prevent tripping. Always work in a well-lit, well-ventilated area where fresh air exchange is constant. Always use all appropriate safety equipment including, but not limited to, splash-guard chemical-proof eyewear, rubber or neoprene gloves impervious to epoxies and solvents, a NIOSH/OSHA approved respirator designed for vapor/mist protection, skin barrier creams, etc. See *Material Safety Data Sheets*. Avoid all contact with skin and eyes. Avoid inhalation or ingestion. Keep uncured **MM-80** away from flames, pilots, and excessive heat. Do not eat or smoke with epoxy present.

3. TREATMENT FOR EXPOSURE

Eye Contact

- Flush with plenty of water for at least 15 minutes and seek medical attention promptly. Take a copy of MSDS, can labels, and this sheet for the physician's reference.

Skin Contact

- Rinse thoroughly with soap and water for 15 minutes. Follow-up with a skin cleaner cream. If rash or itching develops and persists, visit a physician. Wash affected clothes with laundry detergent and water prior to wearing again.

Sensitivity

- Some people are very sensitive to epoxy resins and/or hardeners. Sensitivity may be indicated by continued dermatitis (rash, itch, burning), shortness of breath, etc. If sensitivity symptoms occur, the person should be promptly removed from all further exposure. Sensitivity can be cumulative.

Inhalation

- Avoid inhaling epoxy components individually and especially when reacting in combination. If vapors or fumes are inhaled, seek fresh air immediately. If breathing is labored, give oxygen and seek medical help immediately. If breathing has stopped, administer artificial respiration until medical help arrives.

Ingestion

- Do not ingest. Seek medical help immediately if either part or both parts are ingested. Provide physician with Material Safety Data Sheets and labels.

4. SPECIAL PRECAUTIONS

a. Combining and Mixing

Mixing is best performed in an oversized container such as a 5-gallon plastic pail held in place by sandbags or similar means to prevent movement during mixing. Carefully pour part A into pail; then carefully add part B, avoiding splashes. If mixing mechanically, insert paddle into liquid and slowly activate to avoid splash, eventually raising speed to necessary rpm.

b. Chemical Reaction Period (Continued)

This epoxy is potentially most harmful during its chemical reaction. Heat as high as 180°F can be released during the reaction. Do not touch containers or dispensers without adequate heat protection. Fume/vapor release is most potent during reaction stage. Do not inhale; respiratory harm can occur. Keep epoxy away from flammable materials such as paper, etc.

c. Grinding Cured Epoxy (and adjacent concrete)

Cured epoxy and adjacent concrete can release harmful fumes and airborne dust as a result of grinding. All personnel in affected area should wear approved respiration equipment or be removed from area. Grinder operator should wear all protective equipment worn during normal installation plus a dust respirator suitable for fibrous glass, cellulosic fibers and vapor/mist.

5. AFTER INSTALLATION

- Clean spills and tools with a solvent such as Toluol or Xylol. Cured epoxy can be removed by shaving excess with a tile scraper using disposable blades. Do not use solvents to clean skin or clothes. Keep solvents away from flames and excessive heat.

- Dispose of all containers and disposable items in full compliance with all applicable local, state and federal laws. Do not incinerate sealed containers.

Warning For Food-Related Facilities: All chemicals, including products made by our company & our competitors, have the potential to contaminate exposed food, packaged food & food packaging supplies. Contamination can occur if goods are present when the chemicals are used, or if goods are brought into the affected area after use but prior to removal of any residual contamination. USDA, FDA and other laws and regulations may require the removal or careful protection of food and supplies, followed by possible odor removal and/or cleaning of room where chemicals are used or stored. It is the responsibility of the user to be familiar with & adhere to applicable laws and regulations. Assistance is available from many sources including the USDA. The user is further advised that Metzger/McGuire will reject any & all responsibility & claims that result from the improper use or storage of our products.

WARRANTY: Metzger/McGuire Co. solely and expressly warrants that its product shall be free from defects in material and workmanship for 12 months from the date of purchase. Unless authorized in writing by an officer of Metzger/McGuire, no other representations or statements made by Metzger/McGuire or its representatives, in writing or orally, shall alter this warranty. Metzger/McGuire makes no warranties, implied or otherwise, as to the merchantability or fitness for ordinary or particular purposes of its products and excludes the same. If any Metzger/McGuire product fails to conform with this warrant, Metzger/McGuire will replace the product at no cost to the purchaser. Purchaser's sole remedy in any case shall be limited to the purchase price or replacement cost of product and specifically excludes labor and the cost of labor, lost wages and opportunity costs, and all other possible incidental, consequential or special damages resulting from any claim of breach of warranty, breach of contract, negligence or any legal theory. Any warranty claim must be made within one (1) year from the date of material purchase. Metzger/McGuire does not authorize anyone on its behalf to make any written or oral statements which in any way alter the installation procedures or written installation instructions published in its product literature or on its packaging labels. Any installation of Metzger/McGuire products which fails to conform with such installation information or instructions shall void this warranty. Purchaser shall be solely responsible for determining the suitability of Metzger/McGuire's products for the purchaser's intended purpose.

0503

MM-80

The Industry Standard
Heavy Duty, Semi-Rigid
Epoxy Joint Filler

••• **IMPORTANT** •••
**INSTALLATION
INSTRUCTIONS**

JOINT CLEANING/PREPARATION

FILLER DEPTH REQUIREMENTS

MIXING INSTRUCTIONS

DISPENSING INSTRUCTIONS

FINISHED FILLER PROFILE

WARNING:

Failure to Comply with These
Instructions May Result in Removal
or Replacement of This Material!

For Technical Assistance:
(800) 223-MM80

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A. WHAT IS MM-80?

MM-80 is a two-part, self-leveling epoxy made specifically to protect floor joint edges against breaking (spalling) caused by the hard wheels of industrial trucks. MM-80 requires no primer under normal conditions, is 100% solids (will not shrink), and cures to a semi-rigid hardness of A90-95. MM-80 should be installed full joint depth in saw cut control joints or 2" minimum in construction (thru-slab) joints or control joints exceeding 2" in depth.

B. MATERIAL STORAGE

Store MM-80 in a cool area. Do not allow to freeze. MM-80 has a minimum shelf life of 12 months. If material sits for over 1 month, turn cans upside down monthly to minimize settlement.

C. CHECKING JOB CONDITIONS

Floors should have an absolute minimum of 30 days cure to ensure that moisture will not interfere with proper bonding. *We strongly recommend that joint filling be delayed as long as possible (or 60-90 days plus) due to normal concrete shrinkage.* Total slab shrinkage (and thus joint opening) takes more than 1 year. (See sheet T-5 for additional information). The longer you wait, the closer you will be to the ultimate joint width. MM-80, due to its relative hardness, has minimal expansive capability. Slab should be dry. Work area must be well ventilated. *If applying MM-80 in refrigerated cooler rooms, be alert for moisture in joint and take steps to dry. MM-80 is not for use in freezers.*

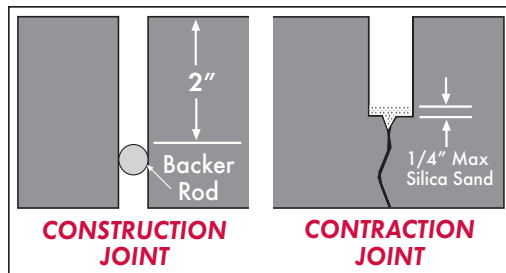
D. TOOLS AND EQUIPMENT

We recommend that MM-80 be installed with a bulk-type caulking gun or through a dual-component pump. If using a bulk-type gun, narrow metal tips or plastic disposable cones are preferable. Other equipment needed will be a variable speed drill, paint mixer (Jiffy or equal, not flat paddle), air compressor or high power vacuum, sand (dry, bagged), solvent (Toluol, Xylo, MEK), plastic mixing pails, and all normal safety equipment such as protective goggles, rubber gloves suitable for epoxies, etc. (See MSDS).

E. JOINT PREPARATION

Joints should be completely free of saw-cut laitance, dirt, and debris. We recommend using a dustless concrete saw with a dry-cut diamond or masonry blade. The blade width should be of equal or slightly greater width than the joint to ensure side-wall cleaning, or should be run along both joint walls if blade is narrower. Remove all remaining residue with vacuum or compressed air. Remove curing and sealing compounds. Under normal circumstances no primer is required. If unusual conditions exist, contact our office. Applicator may seal off cracks beneath saw cuts by placing a 1/4" maximum layer of silica sand (20 to 40 grit) at base of joint. **DO NOT USE FOAM BACKER ROD IN CONTROL JOINTS!** Adding silica sand directly into blended (A+B) instead of placement at joint base is acceptable if approved by project authorities and if provisions in section N-1 are followed. For construction joints, sand or backer rod can be used to achieve filler depth of 2" minimum. (See sketches below.)

F. JOINT DESIGN DETAILS



G. TEMPERATURE FACTORS

Like most epoxies, MM-80 is affected by temperature. In warm or hot weather, MM-80 will have a very short pot life. To extend the working time, place the unopened A (resin) can in ice water for 30 to 45 minutes before mixing. In cooler weather, MM-80 will have a longer work time. To make it cure faster, apply heat or allow to sit in mass after mixing for several minutes. See separate tech sheet T8 for instructions on installing MM-80 in coolers.

H. MIXING MM-80

Read MSDS and follow all safety measures, including working in an obstacle-free, well-ventilated area. Due to limited pot life, mix only one pre-measured unit at a time. Open the resin can A (the larger can) and pre-mix to blend any settlement. If possible, pour into a larger mixing container. Add hardener can B gradually (while continuously mixing). Set B can on side and let remaining resin gather, then mix in during process to ensure all B is used. Mixing is best performed using a variable speed drill at a low speed with a Jiffy-type mix paddle. Mix for 1 1/2 to 2 minutes until thoroughly blended with no streaking. Do not undermix. If mixing must be done manually, allow one extra minute of mixing. *Install Promptly Due to Short Pot Life.*

If using dual-component pumps, it is recommended that regular ratio checks be taken to ensure pump is on ratio. A 750:150 ML dual cartridge set can be used to ensure ratio consistency.

I. INSTALLING MM-80

MM-80 is most effective as an edge protector when its finished profile is flush with the floor. The best way to achieve this is to overfill, allow to cure, then shave flush. To prevent MM-80 from staining the top of the slab (at the overfill) it is best to prevent it from adhering. Typical adhesion reducers include a coating of wax, soap (bar or liquid), or Metzger/McGuire's SPF (Stain Preventing Film). In all cases care must be taken to prevent these items from getting inside the joint. The joint edges may also be taped. Flush out the gun with solvent and then load the MM-80. Make an initial pass, filling the joint to within 1/2" of the top, and allow the MM-80 to settle. Within 30 to 60 minutes make a second pass, overfilling the joint slightly and leaving material crowned. Monitor the application and apply additional passes if needed to achieve a crowned joint. (Flush gun out with solvent if more than five minute delay occurs between reloading to prevent epoxy curing in gun.) If MM-80 gets warm, dispense immediately and flush gun with solvent. Do not tool or shave the MM-80 while it is still liquid, since this may result in a concave (less than flush) cured profile.

J. CAUTION ON CHEMICAL CURE

MM-80 cures chemically through a reaction of parts A and B. During this chemical reaction the released fumes can be potentially harmful. In addition, the reaction causes a high heat buildup of as much as 180°F. Be extremely cautious during the cure period. Do not inhale or get epoxy on skin or in eyes; do not handle container of mixed epoxy without heat resistant gloves. *See Material Safety Data Sheets and safety information for additional information.*

K. FINISHED FILLER PROFILE

To be effective, the MM-80 must prevent impact between the edge of the joint and the hard wheels of material handling vehicles. This means the cured MM-80 should be flush with the floor or slightly higher (crowned). All pourable materials have a tendency to sag. This is especially true of products like epoxies that get warmer during their cure. Applicator should overfill joint, then shave or grind the MM-80 flush after cure. The material is generally in a solid state in 6 to 8 hours and is most easily shaved at this time. Shave using a tile scraper using disposable razor blades. Change blades frequently. Warming the cured MM-80 with a propane torch or hot air gun is recommended prior to shaving. This helps avoid ratchet marks and provides for a smooth,

K. FINISHED FILLER PROFILE (Continued)

flush profile. Grinding is best performed 24 hours or more after cure. *See MSDS for cautions on grinding cured epoxy.* To avoid a conflict on the cured profile, we recommend that the applicator install a sample installation for approval by the architect/engineer, GC and/or owner. This sample becomes the standard for the project.

L. LOW SPOTS

Low spots can occur due to sag or epoxy loss through cracks at bottom of joint. Do not try to apply a thin "cap bead" to cured MM-80. It will not bond. The low spots must be sawn out to a minimum depth of 1/2" and refilled with MM-80.

M. AFTER THE INSTALLATION

Clean all tools with solvent and remove spills on floor with solvent or by scraping. The floor, depending on temperature, can usually be opened to light traffic within 8 hours and heavy traffic in 24 hours. If the floor is to be acid-etched or coated, allow approximately 7 days of cure time for the MM-80. MM-80 is unaffected by light muriatic acid and almost all coatings. A test coat is always recommended. Once cured, MM-80 is not affected by mechanical scrubbing or most cleaners. Residual staining left on the top edges from overfilling is difficult, sometimes impossible, to remove. Wire brushing with solvent (toluol, xylo) may be somewhat successful. Stains tends to fade over time with normal scrubbing operations.

N. SAND MODIFICATION

MM-80 can be silica sand modified. Silica modification is allowed ONLY under the following circumstances:

1. Choking-off Shrinkage Cracks Below Saw Cuts

If allowed by project authorities, the shrinkage crack at the bottom of the saw-cut joints may be choked-off by adding silica sand directly into the mixed MM-80 instead of silica placement in the joint itself. Silica addition shall not exceed one quart silica to each one gallon of mixed MM-80. Silica modification must be limited to only first pass, and not to the final (2nd overfill) pass. Acceptable silica gradation shall range from silica dust to 40 grit maximum, and must be brought to project in dry, bagged condition. Addition of one quart silica will not yield any volume increase in filler, will not slow cure rate, and will not affect gray color of filler.

2. Thickening for Joints in Sloped Floors.

Follow sand-modification procedure as in #1.

3. For Joints or Cracks Exceeding 1/2" Wide

It is desirable to increase MM-80's hardness when joints are wider and have greater wheel exposure. Slowly add 2 to 2 1/2 gallons of silica to one gallon of blended (A+B) MM-80 and power mix until silica is evenly dispersed and wetted. Silica shall be dry, bagged variety with gradation from dust to 20 grit. Sand or grind off high spots. Adding 2 gallons silica to 1 gallon MM-80 will increase net yield to approximately 2.2 gallons of mortar. Addition of silica will slightly extend potlife time, slightly extend traffic-ready time, and may result in a lighter shade of gray than original filler color.

O. GENERAL NOTES

- Do not add solvent to MM-80. Doing so may cause MM-80 to cure too soft or not at all.
- Do not change the ratio of A to B. Doing so may cause MM-80 to cure too hard, too soft, or not at all.