JOINT FILLER
Technical Bulletin 3

METZGER/McGUIRE

2017 LTD LESA SYSTEMS
ENGINEERED CONCRETE FLOOR SYSTEMS

10 SUGGESTIONS FOR WRITING AN EFFECTIVE JOINT FILLER SPECIFICATION

Every quality floor joint filler installation begins with a well-written specification that provides clear and concise direction for the filler installer, the general contractor and all other involved parties. This technical bulletin will help guide you in crafting such a specification. For additional guidance, standardised floor joint filling specifications are available on our website.

If your project has unique requirements or limitations, please contact Lesa Systems, and we will craft a customised specification for you with no cost or obligation.

1. WHERE TO SPECIFY FLOOR JOINT FILING

We recommend that semi-rigid floor joint filler be specified within the 03300 Cast-In-Place Concrete section. The underlying logic is that semi-rigids are joint fillers and not joint sealants, and thus do not belong in Section 07900. More specifically, they should not be listed in Section 03251, Expansion and Contraction Joints. A cross-reference in Section 07900 can be helpful for contractors.

2. FOLLOW ACI & PCA GUIDELINES

The American Concrete Institute (ACI) and the Portland Cement Association (PCA) both have publications which address the proper filing of joints in industrial floors. These are the standards for the industry since there are no applicable federal or ASTM standards. All Lesa Systems floor joint fillers and filing recommendations comply with ACI/PCA guidelines.

3. AVOID “OR EQUAL” CLAUSES

There are very few semi-rigid epoxy and polyurea filers on the market. Not all are truly equal in quality or properties, even though the data sheets may appear similar. In the filler industry “or equal” is all too often interpreted as “or cheaper”. Always specify acceptable products by manufacturer and by name.

4. PROVIDE DETAILS ON DRAWINGS

A picture is worth a thousand words. Always provide joint filler details in your drawings. Refer to the last page of this technical bulletin for standard detail recommendations.

5. REQUIRE INSTALLER EXPERIENCE

Don’t assume that every subcontractor that might install floor joint filler knows what they’re doing or has the proper equipment. Specify required years of experience, project track record and/or joint filler manufacturer’s approval specific to the installation of floor joint fillers.

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6. SPECIFY INSTALLATION PROCEDURES

Don't assume that merely writing "follow manufacturer's guidelines" will result in proper joint cleaning and filing, as guidance from various manufacturers differs considerably. Don't assume that all installers interpret the term "clean joints" in the same way. If you want a dry-cut saw used for floor joint preparation, rather than having dirt scraped out and being called "good enough", you should specify accordingly.

7. SPECIFY TIMING OF INSTALLATION

New concrete undergoes a long and often irregular shrinkage process. As the concrete shrinks, joints will open wider, leading to potential filler separation. Optimum filler performance is achieved when filling is deferred as long as possible. Specifying both minimum and preferred slab cure times is essential.

8. REQUIRE A SAMPLE INSTALLATION

Specs should call for the contractor to provide a sample installation prior to the start of actual work. The sample should be checked for preparation procedures, proper filler depth and finished profile. If acceptable, the sample should be made the standard for the rest of the project.

9. QUALITY VERIFICATION

Our experience indicates that 60% or more of all installations are deficient, whether through ignorance or intentional cheating/shortcuts. Require the general contractor or a testing lab to perform regular inspections both during and after the installation. For example, require one inspection for every 300LM of joint. Have the assigned inspector keep a log of test locations and his findings. If a pattern of deficient work is noted, expand the scope of the inspections.

10. ADDRESS FILLER SEPARATION

Almost all joint filling in new floors is done long before all significant slab shrinkage has taken place. This means that some degree of filler separation, adhesive or cohesive, is to be expected. To avoid project conflicts, it is strongly recommended that specifications contain provisions if filler separation is to be corrected, by what process, and who shall be responsible for the corrections.

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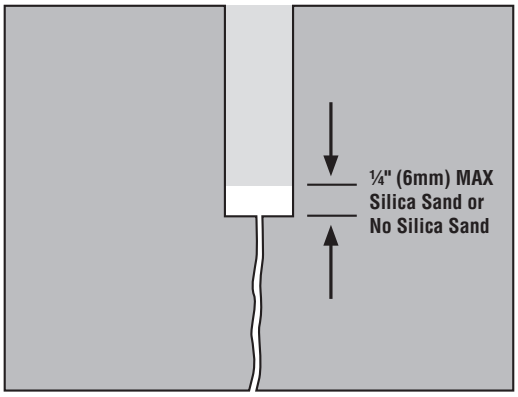
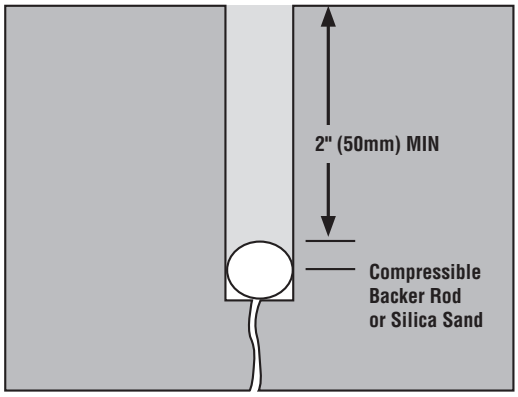
STANDARD FLOOR JOINT FILLING DETAILS

The following details comply with both American Concrete Institute (ACI) and Portland Cement Association (PCA) guidelines for the installation of a semi-rigid epoxy or polyurea floor joint filler.

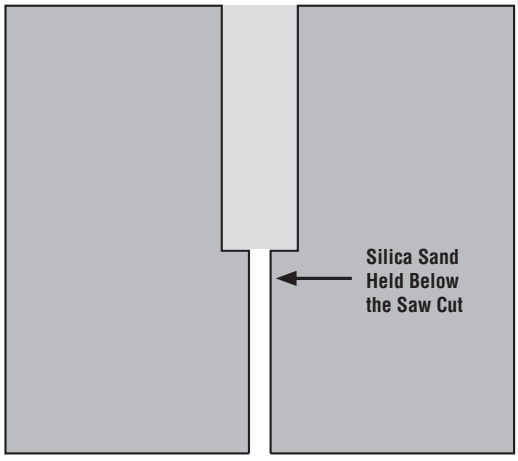
SAW CUT JOINT LESS THAN 2" (50mm) DEEP



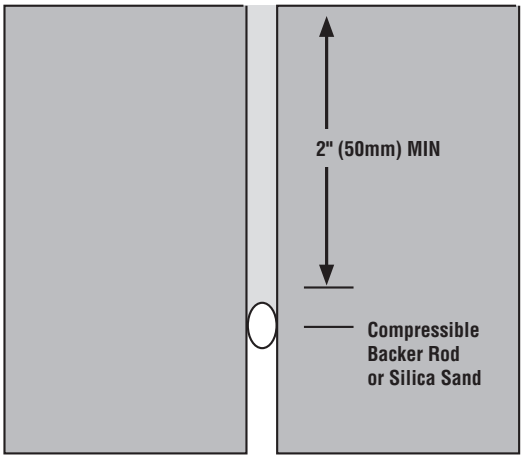
SAW CUT JOINT LESS THAN 2" (50mm) DEEP



SAW CUT CONSTRUCTION JOINT



CONSTRUCTION JOINT NOT SAW CUT



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