PREVENTING/DETECTING DEFICIENT FILLER INSTALLATIONS

The photo to the right was taken one year after the completion of a new warehouse. The owner was spending $3,000 per month to replace wheels on his material handling vehicles and repair damaged transmissions.

The primary cause of the joint deterioration was a deficient joint filler installation (filled to 3/8" deep rather than full joint depth). The general contractor spent $40,000 of his own money correcting the problems. That's a huge price to pay when the problem could easily have been prevented.

In any given year we inspect 200-400 filler installations across the U.S. and beyond. It is no exaggeration when we say that 70-90% are deficient. This is regrettable because proper joint filling is not a highly technical operation. There is no justifiable reason for the installation not to be performed correctly, especially with Metzger/McGuire products, since our literature and installation specifications are so comprehensive.

HOW TO DETER DEFICIENT JOINT FILLER INSTALLATIONS

Some basic principles you can employ to prevent improper joint filer installations...

Knowledge

Understand the concept of what joint fillers are meant to accomplish, and be sure all field people understand as well. Take the time to find out why certain products are better than others. (There are at least 80 semi-rigid epoxy and polyurea fillers on the market, and they are **not** all equal.)

Avoid Ambiguities

Specifications should be tight and clear, leaving as little latitude as possible. Any ambiguities between GC and designer or GC and applicator should be resolved prior to installation start-up.

Convey Expectations

It is vital that everyone understands that floor joint filling is a critical element in providing the owner a durable floor. Let everyone know you will accept nothing less than a professional, proper installation.

Communication

Create a loop-of-communication between the designer, the GC, the installer, and anyone else involved, especially the manufacturer of the filler to be used. The more people that are involved and watching, the more likely the installer is to fill the joints properly.

Specify Accountability

Let the installer know in advance that he will be held accountable for his work. The GC's function should include ensuring that all work, including the joint filling, is performed according to plans, specs and manufacturer's instructions. If the GC fails to do this job he may end up sharing the consequences of any improper installation and the labor and material costs associated with correcting the deficient installation.

Specify Enforcement

The best way to get the installers attention is to advise in **advance** that any impropriety detected may result in him having to remove part or all of his work for verification, and then replace it at his own cost.

Common Sense in Selecting an Applicator

All too often this is the one factor that gets placed on the side, especially in the midst of a tight schedule. ***A substantially lower bid price should be a warning, not a reason to award the bid.*** Investigate the reason or discard the bid. Always ask for previous project referrals and consult filler manufacturer for applicator referrals.

METZGER/McGUIRE

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HOW TO DETECT DEFICIENT JOINT FILLER INSTALLATIONS

DEFICIENCY	HOW TO PREVENT DURING CONSTRUCTION
Filler Substitution Using a cheaper, unapproved filler can save an unethical applicator lots of money.	• Check to see that applicator has brought right material to site • Watch for delivery of containers that look old, rusted , damaged, previously opened. • Watch for stockpiles of the specified filler that never seem to go down in size or get moved. • Ask for proof of purchase for specified filler
Inadequate Joint Cleaning The filler must bond directly to bare concrete, not to saw laitance, dirt, curing compounds, sealers, etc.	• Watch for piles of debris that never increase in size or move. • Look into joints with the flashlight just before the joint is filled. • Insert a file or masonry blade into the joint and scrape it against a side wall to check for remaining saw laitance. No material will adhere properly to a debris coated joint wall. • Scrape base of joint with a screwdriver or five-in-one tool to check for packed laitance, etc. Look for shrinkage crack at joint base.
Inadequate Filler Depth Saw cuts must be filled to their full depth. Construction (formed) joints should be filled at least 2" deep (50 mm).	• Watch for signs of 1/4" diameter compressible backer rod on site. • Check joints just prior to filling for backer rod or debris left in place. • After filler has cured, drill a 1/8" diameter hole through it. Shallow fills will be readily noticeable if the drill bit plunges. • Check depth of any silica sand used to choke off joint base. Silica sand should be limited to 1/4" max.
Less-Than-Flush Profile A properly installed filler will be flush with the surface, thus eliminating wheel-to-edge impact points.	• Watch to see that the installer overfills, then razors flush once the filler has cured. Shaving before solid cure is ineffective. • If there is a question as to the flushness, run a hard-wheeled vehicle over the joint and listen for impact. (Simpler: Close your eyes and run your hand over the joint. You should not be able to feel any interruption).

Additional Red Flags

- *Watch out when one bid comes in far below the others*
- *Watch out when the applicator is overly aggressive in trying to get a substitute filler approved.*
- *Watch out when the applicator comes to the project site with only a caulking gun and a raking tool.*

Any time you have concerns about the quality of your filler installation, don't hesitate to call us toll-free at (800) 223-MM80.

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