

Frequently Asked Questions

1. Why does Metzger/McGuire place such importance on floor joint filling?

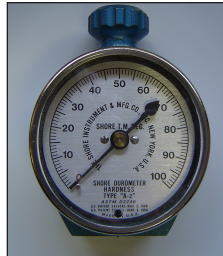
The concrete floor is the heart of every industrial building. The productivity of the facility is directly affected by its material handling operation, and material handling operations are directly affected by the condition of the floor. Since most experts will tell you that joints are the most vulnerable part of a floor, it is common sense to make joints as durable as possible. A properly installed semi-rigid floor joint filler is the key to joint durability.

2. Why do Metzger/McGuire fillers have to be installed full depth in saw cut joints?

One key function of a semi-rigid filler is to restore the continuity of the floor's surface that the joints interrupt. Fillers do this by supporting heavy loads carried on vehicles with small, hard wheels without deflecting. By filling full depth, the filler is supported by the bottom ledge of the saw cut, a practice known as "bottom-basing." The filler cannot be dislodged because it cannot be driven downward. See *Technical Bulletin T1* for more detailed information.

3. You use the term "Shore A Hardness" to describe your fillers. What is Shore A Hardness?

The relative hardness, or stiffness, of fillers is measured by the use of a Shore Gauge. This is a gauge with a needle on the bottom. When the needle is pressed against a cured sample of filler, the reading indicates the fillers resistance to deflection. In other words, the reading basically reflects a filler's load carrying capability. Both ACI and PCA guidelines call for fillers used to fill joints in industrial floors to have a Shore hardness of A80 or higher. A80 is comparable to a hard rubber.



4. Some fillers promote their elongation. Is this a meaningful property?

Consider holding a thick rubber band. If you stretch it lengthwise you can easily get it to elongate, but stretching it sideways is far more difficult. Joint fillers only experience lateral (side-to-side) expansion, not elongation. Both polyurea and epoxy fillers typically have expansion capabilities of 15% or less. Elongation is therefore not indicative of a filler's ability to accommodate joint widening.

Note: As Technical Bulletin T11 explains, most joints will open 50-100% during normal slab shrinkage. Regardless of whether a filler has a 10% or 20% expansion capability, it will still separate after installation if installed early.

5. Should I specify a semi-rigid filler for isolation joints, such as at column, slab-to-wall junctions, at curbs, etc.?

Semi-rigid fillers are designed to protect joints from impact and wear. If a joint might be exposed to wheel traffic, like some column diamonds, use a semi-rigid. If not, using a more flexible polyurethane sealant usually makes more sense (and costs less).

6. Should semi-rigid fillers be used in exterior joints?

In most exterior applications the primary objective is to prevent moisture from entering the joint, not to provide edge protection from hard wheels. A flexible sealant is therefore the best choice. The exception is if the joint will be subjected to both hard wheel traffic and moisture, as with a covered exterior dock. Then a semi-rigid is a good choice, but with the understanding that seasonal movement will compromise the adhesion of a stiffer material and may necessitate regular touch-up and/or replacement.

7. Can your filler pull the edges off joints as they open?

The adhesive strength of all M/M fillers is intentionally kept relatively low, in the 250-350 psi range. The internal strength of properly blended and finished concrete should be far higher than this. In other words, our filler should always debond or split internally long before it tears off any concrete edges. The advent of early-entry saws has been a huge benefit for the floor industry, but these saws can also cause micro-fracturing of joint edges if the concrete has not yet reached adequate strength or if worn plates or blades are used. When joint edges are micro-fractured, fillers with even low adhesive strength can tear pieces off the edge. If you encounter projects where small pieces of concrete are attached to the filler, always look first to the joint edges. Micro-fracturing can often be detected by wetting the edge and looking for stress marks.

8. Do your fillers have chemical resistance?

Both epoxies and polyureas have some chemical resistance, but not to all chemicals. Call us and identify the chemicals to be present. We can then recommend the best filler.

9. How can I verify that the installer has really used the Metzger/McGuire filler I specified?

Jobsite substitutions are not that common, but they're not unheard of. If you are suspicious, first call us and we can check our sales for that installer. You might also request that the installer provide you with documentation of purchase, such as a very timely invoice. If preferred, provide us with sample of the suspect material and we will promptly conduct a chemical analysis at no charge. See sheet *Technical Bulletin T12* for more information.