

IMPORTANT INFORMATION CONCERNING ALL INDUSTRIAL FLOOR JOINT FILLERS

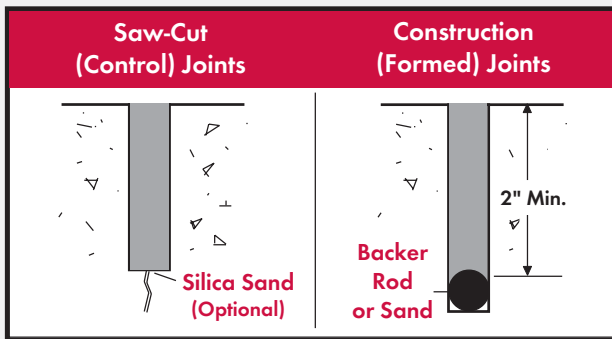
INDUSTRY STANDARDS

INSTALLATION TIMING

The American Concrete Institute (ACI) recommends that filling of industrial floor joints be deferred 60-90 days after floor slab pour or as long as possible. This is to allow control and construction joints time to open closer to their ultimate width through the concrete shrinkage process. (In freezer/cooler areas, floor should be stabilized at ultimate operating temperature for 7 days prior to installation). ACI further recommends an absolute minimum cure of 30 days before installing joint filler material to prevent filler adhesion issues.

INSTALLATION DEPTH

Both the American Concrete Institute (ACI) and Portland Cement Association (PCA) standards call for semi-rigid industrial floor joint fillers to be installed full joint depth in saw-cut control joints or 2" minimum in joints deeper than 2".



Example: In a typical 6" slab on grade, the control joints are cut 1 1/2" deep and the construction (cold) joints would be 6" deep. The filler would be installed 1 1/2" in control joints and 2" in thru-slab construction joints.

Joint Filler Base - Control Joints

DO NOT USE COMPRESSIBLE FOAM BACKER ROD IN SAW-CUT JOINTS! Compressible rods do not provide adequate support for floor joint fillers and may deflect under load, exposing joint edges and leading to joint spalling. A 1/4" maximum layer of clean, dry silica sand may be used to seal off joint base and prevent material run through.

Joint Filler Base - Construction Joints/Control Joints 2" + Deep Through-slab construction (formed) joints can either be filled with silica sand to within 2" of floor surface or a backer rod can be placed in compression at a depth of 2" below the surface. Backer rod is permitted in this case because it is not being used to support the material.

JOINT PREPARATION

Proper cleaning/preparation of the joints is critical in ensuring the filler provides optimum joint protection. Joints should be completely free of concrete laitance/debris and should be cleaned to their full depth or 2" minimum. The preferred method of cleaning is to use a dustless concrete saw with a diamond blade. The blade should hit both joint walls in one pass or should be run along both joint walls separately to ensure that walls are restored to clean/bare concrete.

IMPORTANT GUIDELINES AND ISSUES

JOINT FILLER INSTALLATION METHODS

Semi-rigid joint fillers should be installed using a bulk-type caulking or a dual-component pump or dual cartridge kit. We recommend using a two-pass method for epoxy fillers, the first pass filling the joint to within 1/2" of the floor surface. After 30-60 minutes, a second pass is installed, overfilling the joint. Because polyureas have a faster gel time, one pass installation is generally acceptable.

POST-INSTALLATION ISSUES

Joint Filler Finishing - Epoxies

Material overfill should not be "wet-slicked" or removed prior to full cure. After full cure, epoxy fillers should be heated lightly with a propane torch and the overfill shaved or ground flush with floor surface. Polyurea fillers should be shaved flush (heating is normally not required). **Filler profile must be flush with floor surface to provide proper joint protection.** If epoxy filler profile is concave (dished), saw-cut out top 1/2" and refill. Do not apply an epoxy "cap bead"...it will likely peel off under traffic. If polyurea filler is concave, a cap bead of additional polyurea can be applied after roughening surface.

JOINT FILLER SEPARATION - CAUSES; CORRECTIONS

Because concrete shrinkage takes place over a period of one year or more, it's likely that as the joints continue to open the joint filler will separate from the joint walls. Semi-rigid fillers are designed to break bond from the concrete prior to tearing. Thus when a filler separates it should not be considered a failure, assuming that proper joint preparation methods were followed at the time of installation. The best way to reduce separation is to defer joint filling as long as possible to allow for joint movement to occur.

Separation can occur either cohesively or adhesively. Adhesive separation occurs when the filler breaks bond with the joint walls. Cohesive separation occurs when the separation occurs within the material itself. In both cases, we recommend refilling these voids when they exceed credit card width or appear to compromise joint edge protection.

NOTE: Some joint filler manufacturers may claim that their filler will not separate or that their material's elongation properties are superior. Concrete floor joints do not elongate (stretch lengthwise), they open laterally (side to side). Elongation properties do not indicate lateral movement capability. Semi-rigid industrial floor joint fillers which meet ACI & PCA durability standards (Shore A-80+) cannot generally handle more than 15% lateral movement. Any semi-rigid claiming to accommodate more than this is likely too soft to support loads and will deflect under MHV traffic, leading to joint spalling.

JOINT FILLER INSTALLATION IN USDA FOOD FACILITIES

While most epoxy and polyurea joint fillers are either USDA approved or acceptable once installed, there are restrictions and guidelines concerning proximity to food products and packaging during installation. Contact filler manufacturer and/or USDA for information prior to installing materials in the presence of food products or packaging/distribution areas.