

PART I – GENERAL

DESCRIPTION OF WORK

- Provide all labor, products and equipment required to properly install joint filler in all construction and control joints in all interior concrete floor slabs.
- Scope of Work
 1. Filling of all contraction and construction joints in the interior concrete floor slab.
 2. Repair of spalled joints (less than 1”).
 3. Repair of non-moving narrow (1/32” – 1/4”) cracks.
 4. Repair of minor surface defects including pop-outs, chips, and surface pitting.

RELATED WORK SPECIFIED ELSEWHERE

- Section 03300: Cast-In-Place Concrete
- Section 03331: Polished Concrete Floor System

SUBSTITUTIONS

- In accordance with Section 01600.

SUBMITTALS

- The contractor shall prepare all shop drawings, product literature, etc. as required to properly coordinate and construct the project, and as per the requirements of the Project Manual.
- Submit all data items required within this section in a single submittal via e-mail (maximum document size 3Mb, scanned black section combined with data from other sections.
- Submit the following items for review by PETSMART’s Construction Manager.
 1. Submit Manufacturer’s data describing all materials proposed for use on the project.
 2. Submit Manufacturer’s Approved Applicator Certificate.

QUALITY ASSURANCE

- Contractor Qualifications
 1. Installer shall have a minimum of three (3) years experience in performing the types of work covered by this Section and shall be an Approved Applicator of the material manufacturer.
 2. Use only Manufacturer Approved Applicators for work covered by this section.
 3. Approved Applicator shall use tools and equipment specifically designed for the preparation and placement of industrial joint fillers.

ENVIRONMENTAL REQUIREMENTS

- Limit and control damage from excessive dust caused by demolition, preparation, and installation of all Work.
- Limit and control damage from moisture.
- All concrete shall be cured a minimum of 28 days prior to joint filler installation.

PART II – PRODUCTS

MATERIALS

- Subject to compliance with project requirements, provide products as manufactured by the following:
 1. Ardex Engineered Cements
 2. CSS Polymers, Inc.
 3. Metzger/McGuire
 4. Sika Corporation
 5. SpecChem
 6. VersaFlex, Inc.
- Joint Filler (for all interior slabs except colored concrete in Pets-Hotel): Rapid setting, two-component polyurea polymer liquid of 100% solids content, Shore hardness 85-90, compatible with construction materials in contact. Match color of adjacent exposed concrete slab surface.
 1. EdgePro 80 by Metzger McGuire
 2. Flex Joint 85 by SASE
 3. Quick Joint 85, by CSS Polymers
 4. Spal-Pro RS 88, by Metzger/McGuire.
 5. VersaFlex SL/85, by VersaFlex.
- Joint Filler (for all interior slabs in PetsHotel): One part polyurethane elastomeric sealant/adhesive. Match color of adjacent exposed concrete slab surface.
 1. Sikaflex-1A, by Sika
 2. Sikaflex 2cSL, by Sika
- Joint Filler Stain Preventing Film: (Where pre-installation test proves necessary)
 1. SPF by Metzger/McGuire.
- Polymerized Portland Cement Compound
 1. Rapid Set TRU PC or SP, Color Grey
 2. Divots / Spall repair Metzger McGuire Rapid refloor or SASE All-spall
 3. RepCon 928, by SpecChem.
 4. Ardex CD, by Ardex.

- Polymer Modified Topping
 1. RepCon 928 /Acrylic Bonder / SpecFilm RTU, by Spec-Chem.

EQUIPMENT

- Subject to compliance with project requirements, provide equipment manufactured by the following:
 1. HTC
 2. Husqavama Soft-Cut 150
 3. Joe Due Blades and Equipment, Mauston, WI
 4. Pulman-Ermator
 5. SASE Company, Inc, Kent, WA
 6. U.S. Saws, Santa Ana, CA
- Dust extraction system for grinding/sawing:
 1. HEPA filtration vacuum, designed for use with all hand tools when grinding or sawing concrete (minimum 125CFM air flow).
 2. Provide one of the following:
 - a. 26D, by HTC.
 - b. S2400, by Pullman-Ermator.
 - c. Bull 50, by SASE Company, Inc.
- Joint Filler Removal and Preparation
 1. Husqavama Soft-Cut 150
 2. Humpback Cutter Complete, by Joe Due.
 3. Dust Buggy, by U.S. Saws.
- Crack Repair:
 1. 5" Dustmizer 007, by Joe Due.
 2. 5" Crack Attacker, by Joe Due.
 3. 7" Handheld Crack Chaser, by Joe Due.
 4. SawTec 5" Tile Vac, by U.S. Saws.
 5. SawTec 7" Crac-Vac, by U.S.Saws.
- Surface Grinder: Handheld 5"-7" electric surface grinder with dustless shroud/housing.
 1. Dust Avenger 5, by Joe Due.
 2. Dust Avenger 7, by Joe Due.
 3. SawTec 5" Grinder Vac, by U.S. Saws.
 4. SawTec 7" Grinder Vac, by U.S. Saws.

PART III – EXECUTION

EXAMINATION

- An evaluation of the existing floor slab shall be conducted, identifying all defects. Scope of repairs shall be confirmed by the Owner's Representative prior to commencement of work.
- Repairs are not acceptable unless specifically approved on a case-by-case basis by the Owner's Representative.

PREPARATION

- Protect surface of slab immediately adjacent to defect under repair.

JOINT FILLER PLACEMENT (SEE FIGURE 1)

- Fill all contraction and construction joints in all interior concrete floor slabs.
- Where potential staining from joint filler application may be objectionable, utilize stain preventing film, following manufacturer installation instructions. Place SPF prior to joint cleanout process commences.
- Clean joints full depth with a dry-cut, vacuum-equipped saw using a slightly oversized concrete diamond blade.
- Fill with joint filler per manufacturer's installation guidelines. Fill joints from the bottom up taking care not to entrap large air bubbles. Slightly overfill and shave flush to the slab surface after cure, approximately 1hr – 4 hrs after placement.

SPALLED JOINT REPAIR - LESS THAN 1" (SEE FIGURE 2)

- Where potential staining from joint filler application may be objectionable, utilize stain preventing film following manufacturer installation instructions.
- Re-saw the joint edge to a minimum depth of 3/4" with a dry-cut, vacuum-equipped saw allowing removal of the widest spall along a given joint segment to produce a sharp corner on each side of the joint with a minimum of two passes through joint.
- Clean joint of loose concrete, joint filler, laitance, dirt, debris, backer rod, etc.
- Joints must be free of all visible moisture.
- Fill joint cavity per manufacturer's instructions, taking care not to entrap large air bubbles. Overfill joint slightly and shave flush to slab surface prior to grinding process. It may be necessary to place a trace layer (1/8"-1/4") of clean dry silica sand at the joint base to prevent material seepage down through the shrinkage crack.

SECTION 03930: JOINT FILLING

CRACK REPAIR – LESS THAN ¼" IN WIDTH

- Clean crack cavity.
 1. Remove loose concrete, dirt and debris from crack with a wire brush or hand grinder with twisted wire wheel attachment.
 2. Remove any loose segments, including islands formed by crack, with sharp tool.
 3. Use methods that will not widen existing crack.
 4. Vacuum crack to remove all dirt, debris and other laitance.
- Mask slab surface along crack as necessary to minimize overfill.
- Choose material color that closely matches the adjacent floor.
- Install low viscosity rigid urethane repair material in accordance with manufacturer's instructions.
- Repeat until all voids are filled and material crowns slab surface.
 1. Watch for bubble formation and off gassing as that would indicate that moisture is present in crack cavity and steps will need to be taken to dry area prior to further repairs.
 2. Do not allow material to gel before adding additional material.

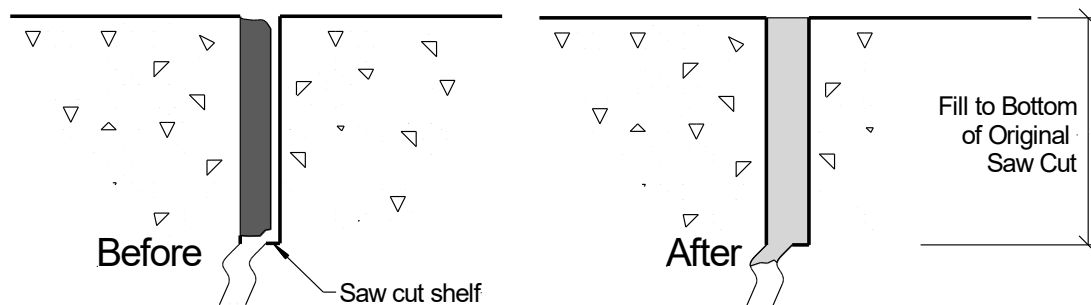
- Grind material flush to surface upon full cure, approximately 15-30min.

BOLT HOLE/POP-OUT SPALL REPAIR

- Recess steel bolt a minimum of 1/2" below finish floor by either punching or cutting.
- For spall fracture edge less than 30 degrees, square edge to a minimum 3/8" depth with either a drill bit or chisel.
- Clean cavity of all debris and laitance with drill activated, brass wire wheel. Vacuum hole to remove all dirt, debris and other laitance.
- Dispense low viscosity rigid urethane at moderate pace using steady pressure. Dispense material into void, refilling as necessary to produce slight crown.
- Grind material flush to slab surface per manufacturer's instructions approximately 15 – 30 min after placement.

PROTECTION

- Protect surfaces of finished floor.
- Prohibit traffic until floor repairs have received final approval by Owner's Representative.



Note: if shelf width at base of saw cut is less than 1/4" on either side of joint, minimum required filler depth is 2" placed over compressibel backer rod or bagged silica sand.

FIGURE 1: JOINT FILLER PLACEMENT

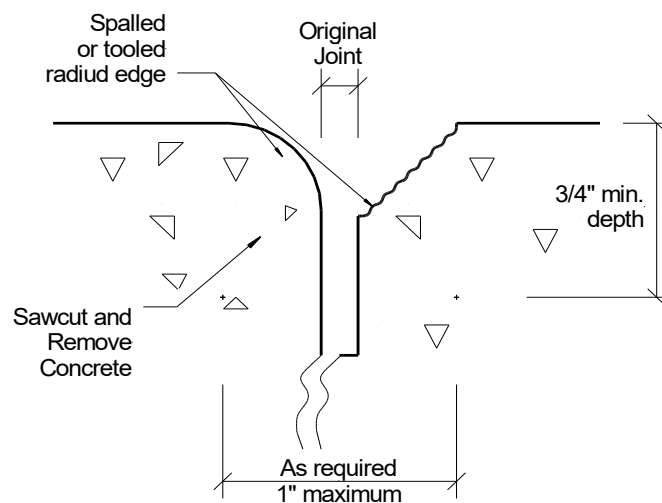


FIGURE 2: SPALLED JOINT REPAIR (LESS THAN 1")

END OF SECTION