**SECTION** 03300

Concrete Floor Joint Filler, Crack and Joint Repair

# **PART 1 - GENERAL**

1.1 General Description of Work

1. Provide all labor, products and equipment required to properly install semi-rigid filler in interior concrete floor slab joints and repair surface defects.

## 1.2 SUMMARY

### A. Section Includes:

#### 1. Joint filler.

#### 2. Joint edge spall repair.

#### 3. Crack Repair.

#### 4. Surface defect repair, including pop-outs, chips, spalls and pitting.

### B. Related Sections include the following:

#### 1. Division 3 Section "Cast-in-Place Concrete Floor Slab" for new floor installations.

#### 2. Division 3 Section "Concrete Shrinkage Control Joints and Fillers" for new floor installations.

#### 3. Division 3 Section "Concrete Slab Patching And Repair" for minor concrete work in remodel projects.

 1.3 APPLICABLE STANDARDS

1. Products and installation shall be in compliance or exceed the joint filling criteria established in the latest ACI 302.1R Guide for Concrete Floor and Slab Repair.

## 1.4 DEFINITIONS

### A. Floor Slab Joints: Joints deliberately created in regular, grid pattern intervals during construction.

#### 1. Construction Joints and Closure Strip Joints: Formed joints between adjacent slab panels, where panels are separate concrete pours.

#### 2. Shrinkage Joints: Also called control or contraction joints, are saw-cut after slab troweling to control slab breaks caused by concrete shrinkage, and keep cracks in straight lines under the saw-cuts.

### B. Cracks in Floor Slab: Random, uncontrolled breaks in the floor slab.

#### 1. Shrinkage Cracks: Cracks that are the result of overall concrete shrinking beyond the capacity of the construction joints to contain.

#### Slab Curl Cracks: Caused by concrete shrinking faster at the slab top than the bottom, with resulting curl at pour edges, breaking may be from wheeled vehicle impact.

### C. Slab Spalls: Locations where slab surface has delaminated, chipped or broken off, exposing aggregate in the mix.

## 1.5 CONTRACTOR QUALIFICATIONS

### Installer shall have a minimum of three (3) years experience in performing the types of work covered by this Section and shall be a Certified Applicator of the material manufacturer.

### Certified Applicator shall use tools and equipment specifically designed for the preparation and placement of industrial joint fillers and concrete crack and defect repair.

## 1.6 SUBMITTALS

1. Joint Filler, Crack and Defect Repair Materials: Comply with section 01330 – Submittal procedures.
2. Product data: Submit manufacturer’s product data, including proper procedures and installation methods as required by the specified product manufacturers.
3. Product data for all products and primary equipment used for repair of existing concrete slab defects.

## 1.7 DELIVERY, STORAGE, AND HANDLING

### A. Deliver materials to project site in manufacturer's original and unopened containers, labeled with type and name of products and manufacturers.

### B. Comply with manufacturer's written instructions for minimum and maximum temperature requirements and other conditions for storage.

# **PART 2 - PRODUCTS**

## 2.1 MATERIALS

### A. Available Products: Subject to compliance with requirements, utilize products distributed by Curecrete Distribution, Inc., 1203 W. Spring Creek Place, Springville, UT 84663 800-998-5664

####  B. Polyurea joint filler: **“CreteFill Pro 85MI Control Joint Filler”**

###  Rapid setting two-component polyurea elastomer joint filler with the physical properties listed below.

* + 1. Shore “A” hardness ASTM D-2240 85-87 A
		2. Viscosity (mixed) Self Leveling
		3. Mix Ratio (by volume) 1:1
		4. Initial Cure 15 minutes
		5. Tack Free (thin film)@ 77°F 3 minutes
		6. Final Cure 60 minutes
		7. Tensile Strength, psi ASTM D-412 960 minimum
		8. 100% Solids acceptable for use in USDA applications
		9. Contains no VOC’s

C. Surface defects, spall repair: **“CreteFill Spall Repair”** Low viscosity rigid Urethane with the physical properties listed below.

 1. Viscosity (Mixed) 250 cps

 2. Hardness, durometer (ASTM D2240) 57- 62

 3. Tensile Strength, PSI (ASTM D412) 4600

 4. Tear Strength (ASTM D624) -lb/mil 489

 5. Elongation % (AST D412) 6% to 8%

 6. Compressive Strength (neat) 3900 psi

 (ASTM C109) (With Sand) 4950 psi

 7. Bond Strength (ASTM 882-99) 3450 psi

 8. Contains no VOC’s

1. Crack Repair  **“CreteFill Crack Repair *EZ Shave*”** Extremely low viscosity modified polymer repair material with the physical properties listed below.

1. Viscosity (Mixed) 100-130 cps
2. Hardness, durometer (ASTM D2240) 50 D
3. Tensile Strength, PSI (ASTM D412) 4900
4. Elongation % (AST D412) 10% to 12%
5. Compressive Strength (neat) 4100 psi

(ASTM C109) (With Sand) 3000 psi

1. Bond Strength (ASTM 882-99) 4000 psi
2. Low odor
3. No joint filler or crack repair material substitutions are allowed unless substituted products meet the above referenced physical properties.

# **PART 3 - EXECUTION**

* 1. Project Conditions
1. Work area should be free of obstructions and other trades.
2. Surface and control joints must be clean and dry.
	1. Examination of Joint Conditions
3. The installer shall inspect the project and joint conditions and notify on-site management in writing of any deficiencies that might adversely affect the quality or durability of the work performed.
4. Work shall commence upon acceptance of joint and project conditions.
	1. Joint Preparation

A. See manufacturer’s instructions for all joint preparation.

 3.4 Joint Filler/CRACK AND SPALL Installation

1. Installation of CreteFill Pro 85MIPolyurea Joint Filler shall be per manufacturer’s instructions.
	1. A. Installation of CreteFill Spall Repair and CreteFill Crack Repair shall be per manufacturer’s

 comprehensive installation instructions.

END OF SECTION 03300