



The "Heavy-Duty" Polyurea Joint Filler  
for Class 5, 6, 7, 8 & 9 Industrial Concrete Floors

## TECHNICAL DATA

## RSF-1

USGBC LEED® EQ Credit 4.1 - Low Emitting Sealant

### 1. Product Name **SPAL-PRO RSF**

### 2. Manufacturer **METZGER/MCGUIRE**

PO Box 2217 Concord, NH 03302 (USA)  
Phone: 603-224-6122 • E-Mail: info@metzgermcguire.com  
Fax: 603-224-6020 Web: www.metzgermcguire.com

### 3. Product Description

#### Composition

**Spal-Pro RSF** is a rapid-setting, two-component polyurea polymer liquid of 100% solids content. When cured, **Spal-Pro RSF** is a medium gray, rubberlike solid with a hardness of Shore A88-94, depending on temperature.

#### Basic Use

**Spal-Pro RSF** was developed to fill and protect joints in concrete floors that are subject to hard wheels and heavy loads. Its primary function is to support such traffic and support joint edges. **Spal-Pro RSF** is designed for use in areas where final temperatures are from 120°F (49°C) to -30°F (-35°C).

#### Other Uses

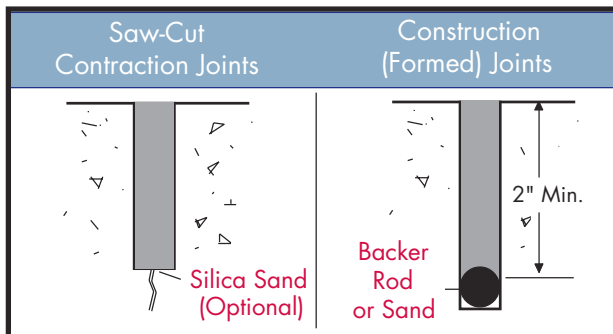
**Spal-Pro RSF** is also ideal for filling random cracks.

### 4. Limitations

- **Spal-Pro RSF** should be installed only after installation areas are stabilized at final operating temperatures (preferably for 7-14 days or longer). Due to its relatively high Shore A hardness, it will not expand if joints widen considerably as temperatures drop.
- **Spal-Pro RSF** is not recommended for the repair of wide (1"+) spalled joints, wide gouges or surface delamination. Refer to data on **Spal-Pro 2000** for such repairs.

### 5. Correct Joint Design/Installation

**Spal-Pro RSF** should be installed to full depth in saw-cut joints and 2" (50 mm) minimum in joints exceeding 2" in depth. Because of its rapid set, "choking off" the base of the joint is normally not necessary. If shrinkage crack is excessive, it may be "choked off" as shown below (contractor's option). Do not use compressible backer rod (Ethafoam, etc.) in saw cut joints less than 2" deep. Compressible rod may be used in joints exceeding 2" in depth if placed to ensure that minimum filler depth is 2" or greater.



## TECHNICAL INFORMATION

	TEST METHOD	RESULTS
HARDNESS, SHORE "A" @ 0°F	D-2240	A92-94
HARDNESS, SHORE "A" @ 70°F	D-2240	A88-92
TENSILE STRENGTH	D-638	930 PSI
TENSILE ELONGATION* (@ 70°F)	D-638	170%
ADHESION TO CONCRETE	D-4541	350-400 PSI
TACK FREE @ 0°F	-	2 Hours
TRAFFIC READY @ 0°F	-	3-5 Hours
MIX RATIO (by vol.)	-	1:1
SOLIDS CONTENT	-	100%
SHRINKAGE	-	Negligible

\* This property provided only for comparison with other polyureas.  
Elongation is not a true indication of lateral expansion capability.

### 6. Color and Packaging

Standard color is medium gray. Available in 10 gal. (US) kits (2-5 gal. US pails), and 1500 ML (750:750) dual-cartridge convenience kits.

### 7. Applicable Specifications

There are no government or ASTM standards for semi-rigid joint fillers. **Spal-Pro RSF** meets or exceeds the criteria outline in the following industry standards:

American Concrete Institute (ACI) Guides/Specifications:  
301-16, 302.1-R15, 310-R13, 360R-10  
Portland Cement Association (PCA):  
Concrete Floor on Ground, Third Edition 2008

### 8. Advantages

- **Spal-Pro RSF is Rated "Heavy-Duty"**  
Unlike flexible polyureas, **RSF's** higher shore hardness provides greater edge protection and support.
- **Spal-Pro RSF is "Rapid-Setting"**  
At 0°F (-18°C) **RSF** can be opened to construction traffic in as little as (3) three hours after placement.
- **Spal-Pro RSF Will Not Become Brittle**  
Even at temperatures far below freezing, **RSF** retains its hard, rubber-like character.
- **Spal-Pro RSF is a "Superior Formulation"**  
You get consistent cure and quality in demanding freezer/cooler environments.
- **Spal-Pro RSF Comes with a "Legacy"**  
For 30+ years, Metzger/McGuire has been the unequalled leader in floor joint protection technology and technical/field services and support.



Customer Service - (800) 223-MM80 - Technical Assistance

E-Mail: info@metzgermcguire.com • Web Site: www.metzgermcguire.com

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### 9. USDA/FDA/LEED® Approval

**Spal-Pro RSF** is acceptable for use in floors subject to USDA, FDA and CFIA inspection and regulation. **Spal-Pro RSF** contains no VOC's (0%) and is fully compliant with LEED® green building standards.

### 10. Technical Assistance

Complete technical support and literature are available from authorized distributors, through our web site ([www.metzgermcguire.com](http://www.metzgermcguire.com)) or by contacting our New Hampshire headquarters at (800) 223-MM80.

### 11. Where to Specify and File

**Spal-Pro RSF** is exclusively for use in filling or maintaining contraction/control and construction joints in cast-in-place concrete floors. It is not an elastomeric sealant, and if referenced in the 079000 section it should only be specified under **079216 Rigid Joint Sealants**. Ideally the product should be specified in **030130 Maintenance of Cast-In-Place Concrete** or **030130.71 Rehabilitation of Cast-In-Place Concrete**.

### 12. Quality Installation Programs

Metzger/McGuire offers quality installation assurance programs for qualified projects. Contact Metzger/McGuire for specific information.

### 13. Availability

**Spal-Pro RSF** is available through quality construction supply distributors (listing at [www.metzgermcguire.com](http://www.metzgermcguire.com)) or through our NH headquarters.

### 14. Installation

The following instructions are abbreviated. Complete instructions are provided with each shipment.

#### When to Install

Floor should be stabilized at final operating temperature for 7 days or more prior to installing **Spal-Pro RSF**. Refer to [Technical Bulletins T5 \(Installation Timing\)](#) and [T6 \(Filler Timing for Refrigerated Areas\)](#) for additional information.

#### Joint Preparation

Joints should be free of saw laitance, dirt, debris, frost and/or visible moisture. Joint cleaning procedures must accomplish the removal of all of the above. Failure to do so could compromise adhesion. This is best accomplished using a dry-cut saw with diamond blade. No primer is needed. Contact Metzger/McGuire if unusual conditions are suspected.

Choking off the base of the joint is normally not required due to **Spal-Pro RSF's** rapid set. Applicator may at his option choke-off the shrinkage crack if it is excessively wide (as shown in joint design spec, section 5). Do not use compressible backer rod (Ethfoam, etc) in saw cut joints.

#### Prior to Dispensing

Thoroughly read SDS and complete installation instructions. **Spal-Pro RSF** must be dispensed with dual-feed power dispensing equipment, or with pre-filled, dual-dispense cartridge units. Manual dispensing is impractical due to short working life (2-3 minute gel time). Power dispensing systems should be set to a 1:1 ratio by volume, with lines and material tanks heated and insulated. Material should be maintained at a minimum temperature of 75° F (24°C) for best results. We recommend the use of a 1/2" diameter (ID) static mixer of 30 or 32 elements for material dispensing. Performing periodic ratio checks on power dispense units to ensure proper cure is highly recommended.

Material provided in drums or pails should be thoroughly mixed to redistribute any settlement that may have occurred during shipping or storage. Cartridges should be shaken aggressively to accomplish same.

#### Dispensing

Fill joint from bottom to top, preferably using a dispensing tip that fits into the joint. Take care not to entrap air bubbles. Joint can be filled using either a one or two pass technique. The **Spal-Pro RSF** should overfill the joint, leaving a crowned profile, and allowed to cure.

The crown should be razored off in 2 to 5 hours (depending upon floor temperature), leaving a filler profile flush with floor surface.

#### Dispensing (Continued)

Should filler cure below the floor surface (due to settlement into the void at base of joint, etc.), abrade surface of the low filler, ensuring at least 1/2" of clean joint sidewall is present and re-apply additional filler.

**Spal-Pro RSF** overfill may leave a slight stain on concrete. The degree of staining will depend on the surface density of the slab. The stain will generally fade as a result of subsequent traffic and floor cleaning procedures.

#### Bubbles in Surface of Bead

Small bubbles may develop during the cure of the material (generally from air entrapment or moisture). Bubbles may be "popped" by applying light heat to surface of material prior to cure. Small (pinhead, etc.) bubbles will not adversely affect **Spal-Pro RSF's** performance.

#### Clean-Up

Spills of unmixed components can be cleaned up with solvent (MEK, denatured alcohol, etc) or scraped/shaved off floor and tools if cured.

### 15. Maintenance

Once cured, **Spal-Pro RSF** is basically maintenance free. If joints should open wider after installation, separations may occur adhesively (filler-to-joint wall) or cohesively (internally). Refer to [Technical Bulletin T11 \(Joint Filler Separation; Causes & Corrections\)](#) for additional information.

### 16. Approximate Coverage Rates

Joint Size (US)	LF/Gal.	Joint Size (Metric)	M/Gal
1/8" x 1"	150	3 x 25	46
1/8" x 1 1/4"	125	3 x 31	38
1/8" x 1 1/2"	100	3 x 38	30
1/8" x 1 3/4"	85	3 x 44	26
1/8" x 2"	75	3 x 50	23
3/16" x 1"	100	5 x 25	30
3/16" x 1 1/4"	85	5 x 31	26
3/16" x 1 1/2"	70	5 x 38	21
3/16" x 2"	50	5 x 50	15
1/4" x 1"	80	6 x 25	24
1/4" x 1 1/4"	60	6 x 31	18
1/4" x 1 1/2"	50	6 x 44	14
1/4" x 1 3/4"	45	6 x 50	12
1/4" x 2"	40	9 x 25	15

### 17. Safety

This product is for industrial use only. Use only in well ventilated areas. Practice all normal jobsite safety precautions (clear work area, etc). Refer to SDS and installation instructions for more information.

### 18. Food Related Facilities

USDA limits the use of any chemicals in areas where existing food or food packaging is present and can be contaminated. Contact Metzger/McGuire to discuss project details if contamination is a concern.

### 19. Material Warranty

**WARRANTY:** Metzger/McGuire Co. solely and expressly warrants that its Spal-Pro RSF shall be free from defects in material and workmanship for 365 days from the date of purchase. Unless authorized in writing by an officer of Metzger/McGuire, no other representations or statements made by Metzger/McGuire or its representatives, in writing or orally, shall alter this warranty. Metzger/McGuire makes no warranties, implied or otherwise, as to the merchantability or fitness for ordinary or particular purposes of its products and excludes the same. If any Metzger/McGuire product fails to conform with this warrant, Metzger/McGuire will replace the product at no cost to the purchaser. Purchaser's sole remedy in any case shall be limited to the purchase price or replacement cost of product and specifically excludes labor and the cost of labor, lost wages and opportunity costs, and all other possible incidental, consequential or special damages resulting from any claim of breach of warranty, breach of contract, negligence or any legal theory. Any warranty claim must be made within one (1) year from the date of material purchase. Metzger/McGuire does not authorize anyone on its behalf to make any written or oral statements which in any way alter the installation procedures or written installation instructions published in its product literature or on its packaging labels. Any installation of Metzger/McGuire products which fails to conform with such installation information or instructions shall void this warranty. Purchaser shall be solely responsible for determining the suitability of Metzger/McGuire's products for the purchaser's intended purpose

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