

# SOLARGARD<sup>®</sup> SEAM SEALER

WATERPROOFING SYSTEM FOR WEATHERED SINGLE-PLY MEMBRANES

## PART 1 – General

### 1.01 General

- A. This document is intended to provide only **general** guidelines regarding the application of listed materials as furnished by Republic Powdered Metals, Inc. These general guideline specifications are **NOT** intended as project-specific specifications and should not be used as such. The information contained herein may be used, and modified where necessary, by the owner, architect, and contractor in preparing specifications for particular roofing projects. It is the responsibility of the owner, architect, and/or contractor to ensure that these general guideline specifications are consistent with the contractual and construction requirements relating to the project.

### 1.02 Quality Assurance

- A. Applicator’s Qualifications
  - 1. Applicator shall have knowledge and general understanding of building design as well as Republic’s products specified for the project.
  - 2. Applicator shall have business stability and own, or have access to, the equipment necessary for successful completion of the project
  - 3. Technical service on application and suitability of Republic’s materials is available by contacting Republic Powdered Metals, Inc., 2628 Pearl Road, Medina, Ohio 44256.

### 1.03 Submittals

- A. In the normal course of bidding, descriptive literature and technical data on all materials proposed for usage under this specification will be submitted. A roof survey shall be submitted by the bidder identifying total area to be coated, along with pictures of panel profile, seams, and details including any repairs to seams, protrusions, and general conditions of the existing roof along with a completed Notice of Award to Republic.

### 1.04 Product Storage And Handling

- A. Storage of Materials: Store in accordance with manufacturer’s recommendations.
- B. Handling and Protection of Materials: Meet requirements of manufacturer’s recommendations for handling and protection of materials during installation. Handle products so that they are not contaminated by foreign materials.
- C. Damaged Materials: Contaminated or damaged materials shall not be used in the installation and shall be immediately removed from site upon discovery.
- D. Exercise caution when working with solvent based materials within the limitations described by the manufacturer.
- E. Warning: SOLARGARD Seam Sealer contains solvents that may be irritable to some individuals, consult MSDS for SOLARGARD Seam Sealer for precautionary information.

## PART 2 – Products as Manufactured by Republic Powdered Metals, Inc.

### 2.01 Coating System

- A. SOLARGARD Seam Sealer

#### 1. Description

SOLARGARD Seam Sealer is a white single component, high solids moisture curing, aliphatic polyurethane sealer formulated to provide a tough, flexible film for waterproofing seams, endlaps and penetrations of existing single ply membranes.

#### 2. Performance Values

Density @ 77°F(ASTM D 1475-98)	10.1 lbs. / gal
Elongation (ASTM D 412-98a)	700%
Tensile Strength (ASTM D 412-98a)	270 psi
Tear Strength (ASTM D 412-98a)	35 pli
Dry time (ASTM D 1640)	24 hours tack free
VOC	75 g/l

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## 2.02 Accessory Materials

- A. PERMAFAB is a 100% stitchbonded polyester fabric used as a reinforcement in flashings and faulty seam repairs.

## PART 3 – Execution

### 3.01 Preparation For Coating

#### A. Cleaning

1. Remove all loose gravel, dirt, dust, debris, etc., by mechanical brush, stiff broom, vacuum, power washing, etc. All surfaces must be clean and dry. Surfaces exhibiting algae growth must be cleaned with a bleach/water solution and rinsed thoroughly.
2. When applying SOLARGARD Seam Sealer over a previously coated substrate, a test patch should be applied to determine compatibility and adhesion.

#### B. Flashings

Cracked or damaged flashings are to be repaired using PERMAFAB and SOLARGARD Seam Sealer. Loose or detached flashings should be repaired using conventional techniques.

1. PERMAFAB should be unrolled and cut to a maximum length of ten feet prior to setting in place.
2. Apply SOLARGARD Seam Sealer at a rate of 30–40 lineal ft./gal. in a three course combination with PERMAFAB. A three course combination consists of seam sealer / fabric / seam sealer.

#### C. Blisters

1. Make an incision in delaminated plies in a manner to allow the delaminated area to be folded back. Sponge out water and allow area to dry. Trowel a liberal application of SOLARGARD Seam Sealer into the opening, pressing the delaminated plies into place. *If flaps are brittle, cut them off. Because of the thickness of typical single ply membranes, if a brittle blister needs to be removed it will need to be replaced with granular modified bitumen cap sheet. The membrane should be installed per the manufacturers written specifications, to bring the roof membrane back to level with the existing membrane. Once repair is fully cured, 3-course the perimeter of the repair (SOLARGARD SS / Permafab / SOLARGARD SS).*
2. Apply SOLARGARD Seam Sealer at 1 gal./100 sq. ft. (16 wet mils) to the inside of the blister.
3. Replace flaps and apply SOLARGARD Seam Sealer at 2 gal./100 sq. ft. (32 wet mils) 8" wider than the blister area.
4. Cut PERMAFAB 6" wider than the blister area in each direction and embed in the SOLARGARD Seam Sealer, brush for proper adhesion and removal of all voids.
5. Apply a second coat of SOLARGARD Seam Sealer at 2 gal./100 sq. ft. (32 wet mils) over the PERMAFAB and a minimum of 2" beyond edges in each direction, feather out edges.
6. Coverage rates for finished repair (seam sealer / fabric / seam sealer) is approximately 30–40 lineal ft./gal. Rates can vary depending on size of repair.

#### D. Splits

1. Apply SOLARGARD Seam Sealer at 2 gal./100 sq. ft. (32 wet mils) over the entire area and 8" beyond the width of the split in each direction, feather out edges.
2. Cut PERMAFAB 6" wider than the split in each direction and embed in the SOLARGARD Seam Sealer, brush for proper adhesion and removal of all voids.
3. Apply a second coat of SOLARGARD Seam Sealer at 2 gal./100 sq. ft. (32 wet mils) over the PERMAFAB and a minimum of 2" beyond edges in each direction, feather out edges.
4. Coverage rate for finished repair (seam sealer/ fabric/seam sealer) is approximately 30–40 lineal ft./gal. Rates can vary depending on size of repair.

**NOTE:** If an opening, crack, or cut is located over a stress line, like an insulation board joint, it is best to reinforce the line with PERMAFAB for the full length of the affected sheet, from endlap to endlap ("T" joint to "T" joint). Also, before the first coat of SOLARGARD Seam Sealer is applied to the cleaned surface, strip the entire stress line with 2" masking tape as a bond break to help accommodate excessive movement.

#### E. Fishmouths

1. Cut fishmouth to provide a smooth edge and apply SOLARGARD Seam Sealer at 2 gal./100 sq. ft. (32 wet mils) 6" beyond the width of the fishmouth in each direction, feather out edges.
2. Cut PERMAFAB 4" wider than the fishmouth in each direction and embed in the SOLARGARD Seam Sealer. Brush for proper adhesion and removal of all voids.

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3. Apply a second coat of SOLARGARD Seam Sealer at 2 gal./100 sq. ft. (32 wet mils) over the PERMAFAB and a minimum of 2" beyond edges in each direction, feather out edges.
4. Coverage rates for finished repair (seam sealer / fabric / seam sealer) is approximately 30-40 lineal ft./gal. Rates can vary depending on size of repair.

## F. Roof Penetrations

1. The base of all circular roof penetrations, i.e. stacks, vents, etc., may be sealed using SOLARGARD Seam Sealer.
2. The base of all damaged curb penetrations must be sealed using SOLARGARD Seam Sealer embedded into PERMAFAB. Apply SOLARGARD Seam Sealer at 2 gal./100 sq. ft. (32 wet mils), embed PERMAFAB (cut to size), brush for proper adhesion and removal of all voids. Apply a second coat of SOLARGARD Seam Sealer at 2 gal./100 sq. ft. (32 wet mils) over the PERMAFAB and a minimum of 2" beyond edges.
3. Coverage rates for finished repair (seam sealer/ fabric/seam sealer) is approximately 30–40 lineal ft./gal. Rates can vary depending on size of repair.

## G. Seams

1. Apply SOLARGARD Seam Sealer at the rate of 3 gal./100 sq. ft. (48 wet mils) to all seams with a 9" wide roller specified for use with solvent base coatings. Apply the material centered directly over the seam.
2. Faulty, suspect, or open seams, board joints, and staggered end laps should follow repair procedures in section D.
3. All PIB, .060 EPDM, W.R. Grace GRM 120, and in general, most modified bitumen seams, shall be reinforced with SOLARGARD Seam Sealer and PERMAFAB according to specified rates in section D. Questions regarding the need for seam reinforcement of other single-ply membranes should be referred to Republic's Technical Department.
4. Coverage rate for seam detail coat is approximately 60-100 lineal ft./gal.

## 3.02 The Protective Coating

### A. General

For optimum results, the protective coating must be applied after the morning dew has dried and postponed if rain is imminent.

### B. Application

1. SOLARGARD Seam Sealer shall be applied by brush. When applying SOLARGARD Seam Sealer over a previously coated substrate, a test patch should be applied to determine compatibility and adhesion. DO NOT THIN.
2. Skill and experience of the applicator is important to the success of the coating application. Periodic checking of the film build is necessary to ensure best results.
3. Develop a systematic method for application of coating to surface.
4. Do not permit traffic on completed roof surfaces unless absolutely necessary, and only after complete cure.

## 3.03 Clean Up

- A. As work progresses, it is essential to keep equipment in clean, working condition. After each day's application equipment should be cleaned as follows:

1. REPUBLIC THINNER #1 or xylene should be used for general clean-up.

- B. At the conclusion of the project, all equipment should be cleaned and returned to its designated location. Disposal of empty, partially full or full drums should be discussed with the building owner, contractor, or engineer.

## PART 4 – File Data

### 4.01 Enclosures

### 4.02 Warranty Disclaimer

- A. Please note that if Republic Powdered Metals is requested to furnish a warranty, the contractor/ owner must comply with the conditions for warranty issuance set forth on the reverse side of the warranty document, a sample copy of which is available upon request. Republic Powdered Metals reserves the right to refuse issuance of a warranty pursuant to such conditions.

Contact Republic Powdered Metals, Inc. for details regarding available warranties on the SOLARGARD<sup>®</sup> Seam Sealer System.

