

## SPECIFICATION

# SOLARGARD<sup>®</sup> HY-BUILD

## WATERPROOFING SYSTEM FOR MASONRY WALLS

### 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 the manufacturer. 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 the manufacturer'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 the manufacturer's materials is available by contacting the manufacturer.

#### 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 survey shall be submitted by the bidder identifying total area to be coated, along with pictures of the wall profile, seams, and details including any repairs to seams, protrusions, and general conditions of the existing area along with a completed Notice of Award to the manufacturer.

#### 1.04 Product Storage And Handling

- A. Storage of materials:
  - 1. Store materials in accordance with manufacturer's recommendations.
  - 2. Store acrylic emulsion materials so that they will not freeze.
- B. Handling and Protection of Materials: Meet requirements of manufacturer's recommendations for handling and protection of materials during installation. Handle materials 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.

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

#### 2.01 Coating System

- A. SOLARGARD HY-BUILD
  - 1. Description

SOLARGARD HY-BUILD is a water-based, acrylic, elastomeric roof and wall coating formulated to provide a tough, durable, flexible, breathing film for the protection of previously painted or repainted masonry, metal, and built-up roofing substrates. SOLARGARD HY-BUILD will resist the effects of weather, water, abrasion, and substrate movement.

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## 2. Performance Requirements

Weight per gallon (ASTM D 1475)	11.1 ± 0.2 lbs.
Specific gravity (ASTM D-1475)	1.33 ± 0.02
Solids by weight (ASTM D-1353)	63% ± 1%
Solids by volume	51% ± 1%
Elongation @ 77°F (ASTM D-2370)	150% ± 25%
Flexibility @ 0°F (ASTM D-1737)	Passes 1/8 inch mandrel

Tensile Strength @ 77°F (ASTM D-2370)	450 ± 50 psi
Shore "A" Hardness (ASTM D-2240)	70 ± 10
Dry time (ASTM D-1640)	1 hour
Flash point (ASTM D-3278)	None
Clean-up	Water

### 2.02 Accessory Materials

- A. SOLARGARD Acrylic Sealer is a high solids acrylic elastomeric sealer designed to provide waterproofing protection on walls.
- B. SOLARGARD Masonry Primer is a high quality, acrylic, latex paint formulated from durable 100% acrylic resins with excellent weathering and UV resistance.

## PART 3 – Execution

### 3.01 Preparation For Coating

- A. Surface Preparation – Cleaning
  1. All surfaces are to be free of loose mortar, dirt, grease, oil, loose paint and other foreign matter which could prevent proper adhesion. Previously painted surfaces shall be thoroughly cleaned with a high pressure waterblast to remove loose paint or excessive chalking.
  2. Previously painted surfaces must be tested for adhesion and compatibility with coating system.
  3. Mold or mildew must be removed. Scrub surfaces with a solution of one quart household bleach to three quarts of water. Wear protective goggles and rubber gloves. Scrub well with brush and allow solution to remain on the surface for ten minutes then rinse thoroughly with clean water.
- B. Surface Repairs – Masonry, Brick, Concrete, Stucco
  1. Large Cracks (thickness of a credit card, 30+ mils)
    - a. Fill with SOLARGARD Acrylic Sealer.
  2. Spalled or Deteriorated Concrete
    - a. To be repaired using a concrete patching and resurfacing compound.
  3. Repointing/Tuckpointing Mortar Joints
    - a. Deteriorated mortar must be removed either mechanically or by hand.
      1. Upright grinder with a diamond blade.
      2. Mason's chisel and hammer.
    - b. "Rule of Thumb" for removing old mortar.
      1. Remove 100% of the old mortar to a depth 212 times the width of the joint or until sound mortar is found, whichever is deeper.
      2. The removal should also extend at least 2" to 6" into surrounding sound joints.
      3. If moss, mold or mildew has been growing in the joint, wash vigorously with solution as described in 3.01 A.3.

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## c. Mortar Mix

1. Most common mix is 1 part by volume of masonry cement to 3 parts by volume of sand.
2. A better formula which minimizes chances of hairline cracks developing in joints is:
  - 1 part by volume gray or white non-staining Portland Cement, ASTM C-150, Type I or II.
  - 1 part by volume of hydrated lime, ASTM C-207, type S.
  - 6 parts by volume, clean, fine, sharp sand ASTM C-144.

After dry ingredients are mixed, a small amount of clean water is added and worked into the mix. The mortar should be very stiff, allowed to rest 1–2 hours, covered, and just before use, enough additional water added to make a workable paste. Prior to application, the joint should be dampened slightly with water.

## d. Filling and Tooling

1. Mortar is pressed into the joint at 1/4" deep at each pass, in a layered fashion, until flush with wall.
2. A pointing tool is used to press mortar into proper profile.

NOTE: If major tuckpointing work is being considered, a mason contractor may be employed for this phase of the project.

## 3.02 Application

### A. Priming

1. Extremely porous masonry, concrete, and stucco must be primed using SOLARGARD Masonry Primer. When SOLARGARD Masonry Primer has been applied longer than 72 hours prior to application of SOLARGARD HY-BUILD, SOLARGARD Masonry Primer may need to be reapplied. All surfaces, which have been primed, must be clean and free of dirt, grease, oil and other foreign matter, which could prevent proper adhesion of SOLARGARD HY-BUILD.

### B. Finish Coat

1. SOLARGARD HY-BUILD elastomeric coating shall be applied by brush, long nap roller, or spray to specified coverage rates. For brush application use a wide, long bristle brush and "lay-on" the coating—do not spread too thin.
2. If roller application is used, care must be exercised, otherwise there is a tendency to spread SOLARGARD HY-BUILD too thin. A 1/2" - 3/4" nap roller is recommended, depending upon texture of surface. If the application is by brush or roller, we suggest the tools be soaked in water prior to use.
3. Mix well before using. Do not dilute or thin SOLARGARD HY-BUILD.
4. **Spray Equipment Recommendation**

**Pumps:** Graco King 45:1, Graco Bulldog 30:1 or gas powered equivalents. Graco GH733, HydraMax 350 or GMax 7900 or other manufacturers' equivalents.

**Hose/Pressure:** 50'–300' length (depending on spray rig pressure). When using hoses longer than 100' use the next larger hose ID every 50'. Every 50' of hose will reduce the spray pressure of the rig by 10% at the gun tip.

i.e., 300' hose – 3/4" (50/100') to 5/8" (50/100') to 1/2" (50/100') to 3/8" (50').

Good results are generally obtained @ 2000–3000 psi at spray tip.

**Gun:** Graco Contractor Gun, Graco Contractor FTx gun, Graco Silver Plus or equivalent. (Tip extrusions or pole guns can be used).

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**\*Tip Sizes:**

Fan Width (in)	.039	.041	.043	.045	.047	.049
10"–12"	539	541	543	545	547	549
12"–14"	639	641	643	645	647	649
14"–16"	739	741	743		747	749
16"–18"	839	841	843		847	
Flow Rate	1.60 gpm	1.80 gpm	1.98 gpm	2.17 gpm	2.37 gpm	2.58 gpm

**\* Graco Heavy - Duty RAC Switch tips (GHDXXX) Grey**

\* Skill and experience of the spray applicator is important to the success of the coating application. Periodic checking of the film build is necessary to ensure best results.

- On extremely hot days, it may be necessary to dampen the surface before application. SOLARGARD HY-BUILD dries to touch in one hour to a flat luster finish and produces a light texture.

**C. Coverage**

- Porosity and texture of surface will dictate actual rate of application and number of recommended coats.

Coverage rates:

Previously Coated: 1 1/2 gal./100 sq. ft. = 24 mils wet, 12 mils dry.

Bare Block: Prime with SOLARGARD Masonry Primer at a rate of 1 gal./100 sq. ft. Coat with SOLARGARD HY-BUILD at a rate of 2 gal./100 sq. ft. = 32 mils wet, 16 mils dry.

**3.03 Clean Up**

- As work progresses, it is essential to keep equipment in clean, working condition.
  - If spray equipment is used, flush lines with clean water followed by mineral spirits or kerosene to keep metal parts from corroding.
  - General clean-up with water and mild detergent.
- Do not allow the product to remain in spray equipment overnight.
- 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**

- Please note that if the manufacturer 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. The manufacturer 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> HY-BUILD System.



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