

GENERAL GUIDELINE SPECIFICATION

PERMAROOF® G

WATERPROOFING SYSTEM FOR GRAVEL SURFACE COAL TAR BUILT-UP ROOFS

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 close up surface conditions, seams, and all details including any repairs to seams, protrusions, and general conditions of the existing roof along with a completed Notice of Award to Republic, prior to Republic's acceptance of the project.

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.

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

2.01 Coating System

A. PERMAROOF G

1. Description

PERMAROOF G is an emulsified blend of special aromatic oils and additives formulated to be compatible with coal tar gravel surface built-up roof membranes.

2. Performance Requirements

VOC (ASTM D 3960-93)	75 g/l
Density @ 77°F (ASTM D 1475-85)	8.6 lb./gal.
Storage (unopened containers)	Up to 1 year
Clean up	Soap & Water

2.02 Accessory Materials

- A. PERMAROOF® Tar Patch is composed of coal-tar pitch, reinforcing fibers, and plasticizers used for general repairs on coal-tar roofs, including breaks and blisters.
- B. PERMAFAB is a 100% stitchbonded polyester fabric used as a reinforcement fabric for flashing and surface break repairs.
- C. ALUMANATION 301 is an industrial, maintenance, self-priming, aluminum coating formulated with selected high solids, asphaltic liquids, non-drying oils, a blend of natural and synthetic fibers, and fine aluminum pigment.

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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.
2. Flashings, blisters, and other damaged areas must be repaired and allowed to cure for 24 hours prior to applying the PERMAROOF to the entire roof.

B. Flashings

Flashings can be repaired using PERMAFAB and PERMAROOF Tar Patch, or by replacement of compatible flashing material.

1. Cant strips should be provided at vertical surfaces to receive flashing.
2. PERMAFAB should be unrolled and cut to a maximum length of ten feet prior to setting in place.
3. Apply PERMAROOF Tar Patch to all areas in 1/8" thickness.
4. Embed PERMAFAB into the cement from 4" onto the roof surface to a minimum of 8" above roof surface. Adjacent pieces should be lapped a minimum of 4". Trowel or brush for proper adhesion and removal of all voids.
5. Apply a top coat of PERMAROOF Tar Patch to 1/8" thickness over the PERMAFAB and a minimum of 2" beyond edges.
6. Install metal counter flashing as required.
7. After proper cure period, coat all vertical flashings with ALUAMANATION 301 at a rate of 1 ½ gals. per 100 sq. ft. (24 wet mils).

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 PERMAROOF Tar Patch into the opening, pressing the delaminated plies into place. *If flaps are brittle, cut them off. Because of the thickness of typical built-up roofing plies, 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 (Tar Patch / Permafab / Tar Patch).*
2. Apply PERMAROOF Tar Patch at about 1/8" thick and 8" wider than the blister area.
3. Embed PERMAFAB cut about 6" wider than the blister area and top coat with a 1/8" thick layer of cement over the PERMAFAB and a minimum of 2" beyond edges.

D. Splits

1. Apply PERMAROOF Tar Patch about 1/8" thick over the area, 8" beyond the width of the split in each direction.
2. Cut PERMAFAB 6" wider than the split on each side and embed in the cement.
3. Apply a 1/8" top coat of cement over the PERMAFAB and a minimum of 2" beyond edges.

NOTE: If splits are extensive and continuous in one direction, determine cause before proceeding as more extensive repairs may be indicated.

E. Fishmouths

1. Cut fishmouth to provide a smooth edge and apply PERMAROOF Tar Patch.
2. Cut PERMAFAB to size and embed in cement.
3. Apply a 1/8" top coat of cement over the PERMAFAB and a minimum of 2" beyond edges.

3.02 PERMAROOF G

A. Gravel Surface

1. Remove gravel to embedded and clean surface.
2. Repair flashings, blisters, and other damaged areas.
3. Coat all vertical flashings with ALUMANATION 301 @ 1 ½ gals./100 sq. ft. (24 wet mils). Allow coating to dry.
4. Apply PERMAROOF G at the rate of 5-6 gals./100 sq. ft. Because of the irregular, rough surface that can be encountered, these amounts are minimum requirements and may be increased due to surface conditions.
5. Immediately broadcast gravel into wet coating to current local building code / dead load original design (typical 400 lbs./100 sq. ft.).

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6. Do not permit traffic on completed surfaces unless absolutely necessary, and only after complete cure.

B. Application

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 manufacturer’s 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).

***Tip Sizes:**

Fan Width (in)	.039	.043	.047	.051	.055	.059
10” – 12”	539	543	547	551	555	559
12” – 14”	639	643	647	651	655	659
14” – 16”	739	743	747	751	755	
16” – 18”	839	843	847	851	855	
Flow Rate	1.60 gpm	1.98 gpm	2.37 gpm	2.79 gpm	3.25 gpm	3.74 gpm

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

* Additional tip sizes are available between .039–.059.

* 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.

* 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. If spray equipment is used, flush lines with mineral spirits or kerosene. General clean-up with same.
- 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 has been 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 for details regarding available warranties on the PERMAROOF® G System.



2628 Pearl Road ■ Medina, Ohio 44256
 800-551-7081 ■ 800-382-1218 Fax
 www.rpmrepublic.com

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