



## PPG Highway Waterproofing System Repair Procedure

### PART 1 - GENERAL

- 1.1 This section includes repair procedures for Spray Applied Waterproofing Membrane, aka “Membrane Waterproofing (Cold Liquid Elastomeric),” “Cold Liquid Applied Elastomeric Waterproofing Membrane,” “Cold Liquid-Applied Membrane (CLAM),” etc. with an asphalt or concrete wearing course.
- 1.2 REFERENCED PARTIES
- A. Owner: The individual, company, or agency which owns the structure(s) under contract.
  - B. General Contractor: The contractor employed by the Owner to provide all labor, materials, tools, and equipment, either directly or through sub-contractors, to perform all operations necessary for the construction associated with the contract documents.
  - C. Installer: The installer of the waterproofing system. In the event the Installer is directly contracted by the Owner, the installer shall assume the responsibilities designated to the General Contractor listed herein.
  - D. Waterproofing Inspector: An individual with the dedicated role of performing field testing of the PPG Highway Waterproofing system as specified in the contract documents.

### PART 2 - MEMBRANE REPAIRS

#### 2.1 GENERAL

- A. If an area of membrane requires repair, or if the membrane becomes damaged, a patch repair shall be carried out to restore the integrity of the waterproofing system.
- B. The procedures contained herein are intended to be used in conjunction with other PPG issued documents including, but not limited to, **PPG Highway Waterproofing System Tie-In and Overlap Procedure**, **PPG Highway Waterproofing Installation Procedure**, and **PPG Highway Waterproofing Inspection and Testing Procedure**.
- C. Where new membrane is to be joined to existing, cured material, the new membrane shall overlap the existing membrane by at least 6 inches (150 mm)<sup>1,2,3</sup>.
- D. New membrane shall only be applied to existing membrane that is fully bonded to the substrate and meets the minimum thickness required in the contract documents.

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<sup>1</sup> If construction staging is such that existing membrane will be paved prior to installation of adjacent membrane (resulting in a membrane tie-in or overlap), it is recommended that the 6-inch (150 mm) tie-in or overlap area be protected during the paving process to reduce the amount of cleaning required on the tie-in or overlap area.

<sup>2</sup> As a safety factor, it is recommended that the General Contractor and/or Installer ensure the membrane tie-in or overlap surface area is larger than 6 inches (150 mm) to allow for full 6-inch (150 mm) tie-in or overlap.

<sup>3</sup> Installer must protect adjacent areas from overspray to ensure new membrane is only installed on the designated 6-inch tie-in or overlap area. Examples of adjacent areas include, but are not limited to, asphalt paving, untreated existing membrane, parapet walls, etc.

- E. If no such requirements are listed in the contract documents, the minimum thickness of the existing membrane thickness shall be 80 mils (2 mm).

## 2.2 SURFACE PREPARATION

- A. If waterproofing system has been overlaid with asphalt,
  - 1. Sawcut a perimeter around the affected area. Remove asphalt within the sawcut perimeter using pneumatic jackhammers or scrapers with flat blades to expose the membrane.
  - 2. Remove enough asphalt to expose at least a 6-inch (150 mm) perimeter of sound membrane around the damaged area of membrane surface.
- B. Areas of existing membrane shall be cut back to sound material as defined in the contract documents.
- C. If no such requirements are listed in the contract documents, “sound” material may be defined as material that meets the following criteria:
  - 1. Membrane meets the minimum thickness requirements defined in the contract documents, or PPG’s requirements, whichever is more stringent.
  - 2. Membrane is not “feathered”.
  - 3. Membrane is fully bonded to the substrate as illustrated by Pull-Off Adhesion Strength testing defined in the **PPG Highway Waterproofing Inspection and Testing Procedure** document.
- D. Areas of membrane that are not sound shall be cut back to sound material.
- E. Remove asphalt or other overburden as required herein until sufficient membrane surface is exposed.
- F. Install repair material to affected area(s) in accordance with the **PPG Highway Waterproofing Tie-In and Overlap Procedure** document.

## PART 3 - BLISTER REPAIRS

### 3.1 PRIOR TO ASPHALT PLACEMENT

- A. If a blister forms within the membrane system, perform repairs in accordance with PART 2 - MEMBRANE REPAIRS above.

### 3.2 DURING ASPHALT PLACEMENT

- A. If a blister forms within the membrane system, the Installer or General Contractor shall use a Blister Repair Kit provided by PPG.
- B. Installer or General Contractor shall install blister repair material in accordance with the instructions provided in the **Blister Repair Kit Product Data Sheet**.

### 3.3 AFTER ASPHALT PLACEMENT

- A. Perform repairs in accordance with PART 2 - MEMBRANE REPAIRS above.

## **PART 4 - FIELD INSPECTION AND TESTING**

- 4.1 Refer to **PPG Highway Waterproofing Inspection and Testing Procedure** document for field inspection and testing.

## Appendix A – Document Version Control

Version	Date	Author	Rationale	Approval
1.0d	8/31/2023	Jonathan Haydu	First draft	
1.1d	9/5/2023	Jonathan Haydu	Reviewed internally, minor updates.	
1.1	9/6/2023	Jonathan Haydu	Issued	Jonathan Haydu James McCarthy