



TECHNICAL DATA SHEET
AQUA-BLOC® PUMA Resin
Liquid Applied Reinforced Flashing System

Typical Physical Properties

-Solids Content (ASTM D1644-2001 Method A)	100%	-Color	Light Grey
-VOC Content (ASTM C1250-05)	0 g/l	-Crack Bridging (ASTM C1305-08, as per C836/836M-10)	Passed 1/8" @ -15°F, 10 cycles
-Adhesion (ASTM C1583/C1583M-04)	425 psi minimum	-Abrasion Resistance (ASTM C501-84, 2009)	60 mg minimum
-Tensile Strength (ASTM D638-08)	900 psi minimum	-Hardness (ASTM C2240-05, as per C836M-10)	44.7 shore D
-Elongation (ASTM D638-08)	300% minimum	-Dimensional Stability (ASTM D1204-08)	0.09%
-Water Absorption (ASTM D471-06, as per C957/957M-10)	3.2%		

Description

AQUA-BLOC® PUMA Resin is a thixotropic waterproofing membrane based on polyurethane methyl methacrylate (PUMA).

Features

- PUMA technology combines the features of PMMA technology with the elasticity of Polyurethane
- Cures within 1 hour, even at very low temperatures
- Abrasion, puncture and UV resistant
- Has no solvent and is VOC compliant

Uses

AQUA-BLOC® PUMA Resin is combined with catalyst and **Henry® 195 Polyester Fabric** reinforcement to form a monolithic, self-terminating, reinforced flashing membrane for a variety of new construction, refurbishment, and recovery roofing and waterproofing applications.

Packaging

AQUA-BLOC® PUMA Resin is supplied in 2-gal pails. (7.56L pail). Please note **AQUA-BLOC® PUMA Resin** is packaged in a pail larger than 2 gallons to allow space for mixing.

Storage

Store in original, unopened containers between 32°F and 75°F (0°C and 24°C). Storing the material at a higher temperature may reduce its shelf life. Store under dry, ventilated conditions and **out of direct sunlight**. Keep in an upright position and do not over stack.

Shelf Life

Six months in unopened containers stored between 32°F and 75°F (0°C and 24°C).

Site Conditions

The surface temperature must be at least six fahrenheit degrees or three celsius degrees above the dew point and rising. Use a surface dew point meter. Air and surface temperature must be between 32°F and 104°F (0°C and 40°C), RH < 85%.

Surface Preparation

Surfaces to be coated must be firm, dry, and free of loose and brittle particles and contaminants that would impair adhesion.

Asphalt, built-up or granulated substrates generally do not require a primer, *however for improved adhesion and stain resistance, AQUA-BLOC® PUMA Primer is recommended.* All substrates must be free of dirt, contaminants and loose granules. All blisters and ridges must be cut out and repaired by applying **AQUA-BLOC® PUMA Catalyzed Resin** 1/8" (3.2 mm) thick. Work into the crack or break and spread 2" - 4" (25 - 50 mm) beyond, feathering the edges. If damaged area is over 1/4" (6.0 mm) wide or 2" (50 mm) long, embed **Henry® 195 Polyester Fabric** into the **AQUA-BLOC® PUMA Catalyzed Resin** and cover with additional **AQUA-BLOC® PUMA Catalyzed Resin**. Allow at least 1 hour to cure then follow application procedure below.

Metals generally do not require a primer. They must be mechanically abraded by power tool (i.e. disc grinder, not wire brush) back to a clean surface, in accordance with the Steel Structures Painting Council (www.sspc.org) – SP3, Power Tool Cleaning standard and solvent wiped with a clean cloth.

The applicator is responsible for insuring the suitability of a substrate. Best practice is to prepare a test section and check adhesion and compatibility to prove substrate suitability. To test adhesion, embed the first 2" (2.5 cm) of length of a 1" (1.2 mm) wide by 6" (15 cm) long section of **Henry® 195 Polyester Fabric** strip into 40 mils wet of catalyzed **AQUA-BLOC® PUMA Resin** then cover the same 2" (2.5 cm) section with an additional 40 mils wet of catalyzed **AQUA-BLOC® PUMA Resin** and allow to cure for 48 hrs. When checking adhesion, pull fabric straight up. There must be a minimum of five pounds of "pull strength" or a cohesive failure of the fabric for the adhesion to be considered acceptable.

Product Mixing

Prior to using **AQUA-BLOC® PUMA Resin**, it must be thoroughly mixed, using an electric, slow speed (300-400 rpm), high torque drill with mixing paddle, to achieve a uniform distribution of the paraffin contained in the product.

Only catalyze the amount of material that can be applied within the estimated pot life.

1. Pre-mix the resin for minimum 2 minutes
2. Then mix together with the **AQUA-BLOC® PUMA Catalyst Powder** for 1 minute minimum or longer, until achieving a streak free appearance.

The catalyst blend is added in accordance with the following **substrate temperature** guidelines:

32-40°F (0-4°C)	→ add 11-13 volume oz.	per gallon resin (86-102 ml per liter of resin)
40-60°F (4-16°C)	→ add 7-11 volume oz.	per gallon resin (55-86 ml per liter of resin)
60-70°F (16-21°C)	→ add 5-7 volume oz.	per gallon resin (39-55 ml per liter of resin)
70-80°F (21-27°C)	→ add 4-5 volume oz.	per gallon resin (31-39 ml per liter of resin)
80-95°F (27-35°C)	→ add 3 volume oz.	per gallon resin (23 ml per liter of resin)

These rates will also be affected by the resin and air temperature.

Do not mix new material with old, uncured material as this can significantly reduce work times. Use new pails frequently. Decant newly mixed material into smaller containers or onto substrate and spread to prolong working time.

Pot Life @ 32°F and 95°F (0°C and 40°C) is 10-15 minutes if **AQUA-BLOC® PUMA Catalyst Powder** mix volumes were followed. The working time of all PUMA Resin materials will be influenced by the amount of catalyst added, length of time they are mixed, the substrate, ambient temperatures and how quickly they are removed from the mixing pail and spread on the substrate.

Never apply **AQUA-BLOC® PUMA Resin** without first following the directions regarding mixing and catalyzed above.

Application

For best results, apply freshly catalyzed material – use small batch sizes. After the catalyst and resin have been mixed thoroughly, **decant as soon as possible**. **Catalyzed AQUA-BLOC® PUMA Resin** can be applied evenly by notched squeegee, medium nap 1/2" (13 mm) roller and brush. Allow for saturation of rollers and brushes.

Application Rate: **Catalyzed AQUA-BLOC® PUMA Resin** is applied in TWO coats at an approximate rate of 5 gal./sq. for the two layers, depending on surface profile to give a wet film thickness of 80 mils (2.0 mm). The first coat is applied at a wet film thickness of 50 mils (1.27 mm). Embed the **Henry® Polyester Fabric** into the wet resin with a brush or roller (slightly damp with resin), ensuring to remove all trapped air and excess resin. The second coat is applied at a wet film thickness of 30 mils (0.76 mm) onto the fabric until it is completely saturated (no shiny areas).

Special Application note: Catalyzed **AQUA-BLOC® PUMA Resin** should extend a minimum of 2" (50 mm) past the projected installed edge of the **Henry® 195 Polyester Fabric**.

Recoat and Traffic Times: Minimum 1 hour

If the surface is contaminated or over-coat times exceed 48 hours, clean with a clean cloth and **AQUA-BLOC® PUMA Cleaning Fluid**. Allow solvent to evaporate before over-coating.

Limitations

Do not apply too thickly or paraffin will not fully evaporate, causing incomplete cure. **AQUA-BLOC® PUMA System** can be walked on after 30 minutes. Fully cured and over-coated after 60 minutes.

Clean-up

Follow all Health and Safety instructions on MSDS. Wash body with soap and water. Clean tools and equipment with xylene or MEK. For safe handling refer to MSDS of solvent used.

Disposal

Ensure all material is mixed and cured before disposal, in accordance with Federal, State and Local regulations. Dispose of all packaging in accordance with Federal, State and Local regulations.

Caution

DO NOT TAKE INTERNALLY! If swallowed, **CALL PHYSICIAN IMMEDIATELY!** Uncured polymers and curing agents may be alkaline, toxic or both. They may cause allergic reactions or hypersensitivity reactions. Before using, refer to Material Safety Data Sheet (MSDS). Ensure the same safe working methods are followed for all persons in the work area. Wear suitable protective clothing, butyl rubber or nitrile gloves and safety goggles with side shields during mixing and application. When **AQUA-BLOC® PUMA Resin** is applied in enclosed areas without natural ventilation, forced ventilation must be arranged. Avoid strong concentration of vapor as well as direct contact with skin and eyes. If product comes in contact with skin, wash immediately with soap and water. If contact with eyes, rinse immediately with lots of water and seek medical attention. If concentration exceeds recommended limits in MSDS, a NIOSH approved respirator (OSHA 29 CFR 1910.134) is required. **AQUA-BLOC® PUMA Resin** is highly flammable; keep away from all sources of ignition and do not smoke. **KEEP OUT OF REACH OF CHILDREN.**

Employers should obtain a copy of the **Material Safety Data Sheet (MSDS)** from your supplier or directly from Henry at the toll free number or website below.

Limited Warranty

LIMITED PRODUCT WARRANTY: We, the manufacturer, warrant only that this product is free of defects, since many factors which affect the results obtained from this product - such as weather, workmanship, equipment utilized and prior condition of the substrate - are all beyond our control. We will replace at no charge any product proved to have a material defect within 12 months of purchase, provided it has been applied in accordance with our written directions for uses we recommend as suitable for this product. Proof of purchase must be provided. **DISCLAIMER OF WARRANTIES AND LIMITATION OF LIABILITY: THIS LIMITED WARRANTY IS IN LIEU OF ANY OTHER WARRANTIES EXPRESS OR IMPLIED INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. MANUFACTURER SHALL HAVE NO LIABILITY OF ANY KIND BEYOND PRODUCT REPLACEMENT, INCLUDING FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES RESULTING FROM ANY DEFECTS OR ANY DELAYS CAUSED BY REPLACEMENT OR OTHERWISE. IF PURCHASER DOES NOT ACCEPT THESE TERMS OF THIS LIMITED WARRANTY, PURCHASER MAY RETURN ALL CONTAINERS OR PACKAGES OF PRODUCT PURCHASED FOR A FULL REFUND (PROVIDED THE CONTAINERS OR PACKAGING IS UNOPENED AND LESS SHIPPING CHARGES IF ANY) WITHIN 30 DAYS OF PURCHASE. RETENTION OF PRODUCT BEYOND 30 DAYS FROM PURCHASE, OR USE OF PRODUCT SHALL CONSTITUTE ACCEPTANCE OF THE LIMITED WARRANTY TERMS, CONDITIONS AND DISCLAIMERS. THIS LIMITED WARRANTY PROVIDES THE PURCHASER'S EXCLUSIVE REMEDY FOR ANY DEFECT IN THE PRODUCT.**

Contact Warranty Department at warranty@henry.com or location shown below for product or systems warranty information.

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