Application guide

Henry® Acrylic Restoration & Fluid Applied Membrane Systems

This application guide provides instructions for successfully applying a Henry® acrylic roof coating system on metal, aged single ply, asphalt roofs (roll roofing, modified bitumen, built-up roofing, and spray polyurethane foam) and previously coated roofs. An acrylic roof coating system is a fluid-applied roof restoration system, supported by a variety of warranty offerings, that provides a cost-effective alternative to a full roof replacement. This application guide is not intended for applications on shingles, coal tar substrates, gravel covered roofs, cold storage or cryogenic structures, and Kynar® or Hylar® coated metal roofs. Metal roofs must be greater than 28 gauge (0.015").

Acrylic Restoration System Warranty installation options

10-year Acrylic Restoration Warranty								
		Granulated Cap Sheet	Smooth Cap/BUR (non-aggregate)	Single Ply (TPO, PVC, EPDM)	Metal	Aged or 1" new PremiR+ EVO SPF	Warranty Cost	
							Material Plus	Gold Seal
PC		As Required	As Required	As Required	As Required	As Required	No cost	0.06/sq. ft $900 min.
BC	AcryShield® Base Coat 400 505, or 605 501 for SPF applications; or Pro-Grade 280 Acrylic**	15 mils DFT min. 1.75 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq		
TC	AcryShield Top Coat 400, 510, 550 HT and 610; or Pro-Grade 280 Acrylic	17 mils DFT min. 2 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq		
	Total (min. thickness)	32 mils DFT min. 3.75 gal/sq	26 mils DFT min 3 gal/sq	26 mils DFT min 3 gal/sq	26 mils DFT min 3 gal/sq	26 mils DFT min 3 gal/sq		

PC Primer coat BC Base coat TC Top coat

15-year Acrylic Restoration Warranty								
		Granulated Cap Sheet	Smooth Cap/BUR (non-aggregate)	Single Ply (TPO,PVC, EPDM)	Metal	Aged or 1.5" new PremiR+ EVO SPF	Warranty Cost	
							Material Plus	Gold Seal
PC		As Required	As Required	As Required	As Required	As Required	No cost	0.08/sq. ft $1200 min.
BC	AcryShield Base Coat 400, 505, or 605; 501 for SPF applications; or Pro-Grade 280 Acrylic**	17 mils DFT min. 2 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq		
TC	AcryShield Top Coat 400, 510, 550 HT and 610; or Pro-Grade 280 Acrylic	17 mils DFT min. 2 gal/sq	17 mils DFT min. 2 gal/sq	17 mils DFT min. 2 gal/sq	17 mils DFT min. 2 gal/sq	17 mils DFT min. 2 gal/sq		
	Total (min. thickness)	34 mils DFT min 4 gal/sq	30 mils DFT min. 3.5 gal/sq	30 mils DFT min. 3.5 gal/sq	30 mils DFT min. 3.5 gal/sq	30 mils DFT min. 3.5 gal/sq		

20-year Acrylic Restoration Warranty*								
		Granulated Cap Sheet	Smooth Cap/BUR (non-aggregate)	Single Ply (TPO,PVC, EPDM)	Metal	Aged or 1.5" new PremiR+ EVO SPF	Warranty Cost	
							Material Plus	Gold Seal
PC		As Required	As Required	As Required	As Required	As Required	No cost	0.10/sq. ft $1500 min.
BC	AcryShield Base Coat 400, 505, or 605; 501 for SPF applications; or Pro-Grade 280 Acrylic**	17 mils DFT min. 2 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq		
TC1	AcryShield Top Coat 400, 510, 550 HT and 610; or Pro-Grade 280 Acrylic	17 mils DFT min. 2 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq		
TC2	AcryShield Top Coat 400, 510, 550 HT, 610; or Pro-Grade 280 Acrylic	13 mils DFT min. 1.5 gal/sq	17 mils DFT min. 2 gal/sq	17 mils DFT min. 2 gal/sq	17 mils DFT min. 2 gal/sq	17 mils DFT min. 2 gal/sq		
	Total (min. thickness)	47 mils DFT min. 5.5 gal/sq	43 mils DFT min. 5 gal/sq	43 mils DFT min. 5 gal/sq	43 mils DFT min. 5 gal/sq	43 mils DFT min. 5 gal/sq		

NOTES:
* Most likely will require 3 coats
** When using Pro-Grade 280, Pro-Grade 294 can be used as a base coat; excluding SPF and single ply applications. Follow the appropriate Pro-Grade 280 Guide Specification.
For cold storage or cryogenic structures, please contact your Henry Technical Representative.

DFT = Dry Film Thickness (minimum requirement).
Product coverage rates represent minimum application requirement. Coverage rates are theoretical and do not take into account material loss due to spraying, surface texture, waste, etc. For previously coated roof membranes, the product coverage rates indicated in the charts above are applicable.

Acrylic Fluid Applied Membrane System Warranty installation options

10-year Acrylic Fluid Applied Membrane System Warranty						
		Granulated Cap Sheet	Smooth Cap/BUR (non-aggregate)	Single Ply (TPO, PVC, EPDM)	Warranty Cost	
					Material Plus	Gold Seal
PC		As Required	As Required	As Required	No cost	0.06/sq. ft $900 min.
BC	AcryShield Base Coat 400*, 505, or 605 Applications	17 mils DFT min. 2 gal/sq	17 mils DFT min. 2 gal/sq	17 mils DFT min. 2 gal/sq		
RL	Henry 195 or 196 Polyester Fabric	Reinforcement Layer	Reinforcement Layer	Reinforcement Layer		
MC	AcryShield Top Coat 510, 550 HT and 610	17 mils DFT min. 2 gal/sq	8 mils DFT min. 1 gal/sq	8 mils DFT min. 1 gal/sq		
TC	AcryShield Top Coat 510, 550 HT and 610	15 mils DFT min. 1.75 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq		
	Total (min. thickness)	49 mils DFT min. 5.75 gal/sq	38 mils DFT min 4.5 gal/sq	38 mils DFT min 4.5 gal/sq		

15-year Acrylic Fluid Applied Membrane System Warranty						
		Granulated Cap Sheet	Smooth Cap/BUR (non-aggregate)	Single Ply (TPO, PVC, EPDM)	Warranty Cost	
					Material Plus	Gold Seal
PC		As Required	As Required	As Required	No cost	0.08/sq. ft $1200 min.
BC	AcryShield Base Coat 400*, 505, or 605 Applications	17 mils DFT min. 2 gal/sq	17 mils DFT min. 2 gal/sq	17 mils DFT min. 2 gal/sq		
RL	Henry 195 or 196 Polyester Fabric	Reinforcement Layer	Reinforcement Layer	Reinforcement Layer		
MC	AcryShield Top Coat 510, 550 HT and 610	17 mils DFT min. 2 gal/sq	8 mils DFT min. 1 gal/sq	8 mils DFT min. 1 gal/sq		
T1C	AcryShield Top Coat 510, 550 HT and 610	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq		
TC2	AcryShield Top Coat 510, 550 HT and 610	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq	13 mils DFT min. 1.5 gal/sq		
	Total (min. thickness)	60 mils DFT min. 7 gal/sq	51 mils DFT min 6 gal/sq	51 mils DFT min 6 gal/sq		

PC Primer coat BC Base coat TC Top coat RL Reinforcement Layer MC Mid coat S Sealant

20-year Acrylic Fluid Applied Membrane System Warranty**						
		Granulated Cap Sheet	Smooth Cap/BUR (non-aggregate)	Single Ply (TPO, PVC, EPDM)	Warranty Cost	
					Material Plus	Gold Seal
PC		As Required	As Required	As Required	No cost	0.10/sq. ft $1500 min.
BC	AcryShield Base Coat 400*, 505, or 605 Applications	17 mils DFT min. 2 gal/sq	17 mils DFT min. 2 gal/sq	17 mils DFT min. 2 gal/sq		
RL	Henry 195 or 196 Polyester Fabric	Reinforcement Layer	Reinforcement Layer	Reinforcement Layer		
MC	AcryShield Top Coat 510, 550 HT and 610	17 mils DFT min. 2 gal/sq	8 mils DFT min. 1 gal/sq	8 mils DFT min. 1 gal/sq		
T1C	AcryShield Top Coat 510, 550 HT and 610	17 mils DFT min. 2 gal/sq	17 mils DFT min. 2 gal/sq	17 mils DFT min. 2 gal/sq		
TC2	AcryShield Top Coat 510, 550 HT and 610	17 mils DFT min. 2 gal/sq	17 mils DFT min. 2 gal/sq	17 mils DFT min. 2 gal/sq		
	Total (min. thickness)	68 mils DFT min. 8 gal/sq	59 mils DFT min 7 gal/sq	59 mils DFT min 7 gal/sq		

Ancillary components for all warranted assemblies					
Application			Product name	Product description	Coverage rate
Metal seams, fasteners and defects		S	Henry® 295 Metal Seam Sealer or Henry 289	Metal seam sealer	Varies by application
MB/BUR fasteners/ defects	Option #1	S	Henry® 289 White Roofing Sealant	Roofing sealant	Varies by application
	Option #2		HE 195 Polyester Fabric	Reinforcement fabric	300 linear feet per 6" x 300' roll
Single Ply fasteners/defects		S	Henry® 289 White Roofing Sealant	Roofing sealant	Varies by application
MB/BUR cap sheet and Single Ply seams	Option #1	S	Henry® 289 White Roofing Sealant	Roofing sealant	37.5 linear feet per gallon applied at ⅛" thick and 4" wide 25 linear feet per gallon applied at ⅛" thick and 6" wide
	Option #2	S	Seal-Tek Micro Fibers	Fibered roofing sealant	****see mixing guide on TDS
	Option #3	S	Fully Reinforced System Not Required	n/a	n/a

PC Primer coat BC Base coat TC Top coat RL Reinforcement Layer MC Mid coat S Sealant

NOTES:
* AcryShield 400 can be used as a top coat on material only warranty applications
** Most likely will require 3 coats
*** Total thickness to be must be achieved but you must give consideration to temperature and humidity levels during the time of application for curing and application coats.
**** Seal-Tek Micro-Fibers can be utilized for fasteners/defects in lieu of 289; consult Henry Technical Representatives for more information.

DFT = Dry Film Thickness (minimum requirement).
Product coverage rates represent minimum application requirement. Coverage rates are theoretical and do not take into account material loss due to spraying, surface texture, waste, etc. For previously coated roof membranes, the product coverage rates indicated in the charts above are applicable.
Reinforcement layer will add approximately 8-13 mils to the total DFT listed in each application.

Warranty: Henry® acrylic roof coating system warranty durations are based on overall coating thicknesses. See coverage rate chart for requirements. Coverage rates do not account for material loss due to spraying, surface texture, waste, etc. Coverage rates are applicable for previously coated and non-coated roofs.

Safety statements: Use caution when applying and walking on coated surfaces. Coated surfaces can be extremely slippery and can create a fall hazard resulting in injury or death. All air intake ventilation equipment should be turned off to prevent fumes from entering building.

STEP 1: Substrate examination

I. Suitability of substrate:

A. Conduct a visual inspection to ensure substrate suitability.

1. Roofs must have positive drainage.
2. Substrate, insulation and all surfaces must be sound, dry, clean and free of oil, grease, rust, dirt, excess mortar, frost, laitance, loose and flaking particles or contaminants.

II. Adhesion tests: (For instructions see link):

www.us.henry.com/acrylic-adhesion-instructions

A. Granulated modified bitumen: not required

B. Adhesion test requirements:

1. Conduct at least two tests in the field of existing roof membrane, one every 10,000 sq. ft., plus any area of worn roofing, such as cracked or abraded surfaces.
2. Any change in roof substrate
3. Existing roof areas installed in phases
4. Shaded areas
5. Areas indicating ponding water

C. Verify minimum 2.0 pli adhesion strength for each test for warranty eligibility.

D. Adhesion test results less than 2.0 pli:

1. Contact Henry® Product Support or your sales representative if results are less than 2.0 pli.

III. Moisture survey:

A. The installing contractor must verify the existing roofing assembly is dry and leak free prior to installation.

B. Evaluate existing roof assembly for moisture, including saturated insulation, roof deck, roof components and defective roofing. Repair and replace in accordance with National Roofing Contractors Association (NRCA).

C. Do not install acrylic roof coating over saturated insulation or substrates.

D. Moisture survey includes a visual inspection and one or more of the following:

1. Infrared thermography
2. Nuclear scan
3. Electric capacitance/impedance testing
4. Roof core cut samples

IV. Repair or replace defective existing roofing:

A. Ensure skylights, scuppers, gutters, drains, penetrations and structures are firmly secured, watertight and in good working condition.

B. Metal:

1. Replace damaged, weakened or corroded metal panels, fascia, gutters, vents, ridge caps or flashings compromising structural integrity.
2. Remove loose rust with wire brush, sandblast or mechanical abrasion until substrate is smooth and free of loose rust.
3. Remove old and damaged mastic, sealant, and coating at laps, seams and metal fasteners.
4. Ensure fasteners are secure and tight; replace loose fasteners with larger diameter fastener.

D. Modified Bitumen/Smooth BUR:

1. Remove and replace wet insulation and/or defective materials with like-materials and tie into existing roofing in accordance with NRCA.

E. Single ply:

1. To remove wet insulation and/or defective materials, cut membrane on three sides; fold back and replace with like-materials.
2. Fold single ply roofing back into place and patch using like materials or appropriate seam repair tape.

V. Weather considerations:

A. Substrate must remain dry 12 hours after installation.

B. Refer to minimum application temperature chart.

Minimum application temperature	
Product name	**Substrate temperature**
Pro-Grade® 197 Asphalt Emulsion	50 °F (10 °C)
Pro-Grade® 280	50 °F (10 °C)
Pro-Grade® 294	50 °F (10 °C)
AcryShield 400	50 °F (10 °C)
AcryShield 505	50 °F (10 °C)
AcryShield 605	50 °F (10 °C)
AcryShield 510	50 °F (10 °C)
AcryShield 550 HT	50 °F (10 °C)
AcryShield 610	50 °F (10 °C)
Henry® 289 White Roofing Sealant	50 °F (10 °C)
Henry® 295 Metal Seam Sealer	35 °F (2 °C)

STEP 2: Substrate preparation

I. Clean:

A. Confirm local water run-off ordinances and restrictions prior to cleaning roof.

B. Surface cleaning:

1. Single-ply, MB/smooth BUR and metal:

a. Carefully pressure wash roof surfaces with greater than 2,000 psi pressure to remove loose granules, debris, rust, scale, dirt, dust, chalking, peeling or flaking coatings, etc. Do not force water into the roof system or damage roof surfaces.

b. Remove grease, oils or contaminates which may interfere with adhesion using warm water and mild detergent.

c. Treat areas of algae, mildew or fungus with a solution of household bleach and water.

d. Rinse roof to ensure removal of all detergent or anything else that could affect adhesion.

II. Primers:

A. Metal roof and metal components:

1. Rust primer: Install Prime-Tek Metal Primer per manufactures recommendations.

III. Flashing and details:

A. Complete flashings and details prior to roof coating installation.

B. Mix acrylic roof coating with drill and mixer blade prior to use until consistent viscosity is achieved.

C. Refer to charts below for pre-treatment guidelines.

D. Metal seams:

1. Horizontal laps, un-crimped vertical seams and ridge cap seams:

a. Apply foot pressure to under lapping panel next to horizontal lap or vertical seam; stitch-fasten gaps opening more than 1/8" wide on metal panel lap ensuring a continuous substrate/eliminate gaps.

Pre-treatment of MB/BUR and Single Ply defects and loose or torn seams		
Flashing	**MB/BUR**	**Single Ply**
Option #1	1. Generously apply Henry® 289 White Roofing Sealant under loose or torn seams, splits, cracks, blisters and cracked metal edging using a brush or trowel and firmly press loose roof membrane into sealant. 2. Apply Henry® 289 White Roofing Sealant at ⅛" thick (125 wet mils) minimum, extend 3" on each side of defect. 3. Center 6" wide Henry® 195 Polyester Fabric over seam and fully embed into sealant, ensuring 3" of fabric on each side of seam. Brush or roll fabric for proper adhesion and remove all voids. 4. Apply second layer of Henry® 289 White Roofing Sealant at ⅛" thick (125 wet mils) minimum, extend 3" on each side of defect; ensure fabric is fully coated.	Apply Henry® 289 White Roofing Sealant at ⅛" thick (125 wet mils), extend 4" minimum each side of seam.

Pre-treatment of secure and intact seams				
Flashing Options	**Modified Bitumen (MB) unreinforced base coat assemblies**	**Single Ply**	**Metal**	
			Crimped standing vertical	Horizontal laps, un-crimped vertical seams and ridge cap seams
Option #1	Apply Henry® 289 White Roofing Sealant in accordance with the product TDS at ⅛" thick (125 wet mils), extend 3" minimum each side of seam.	Apply Henry® 289 White Roofing Sealant in accordance with the product TDS at ⅛" thick (125 wet mils), extend 2" minimum each side of seam.	No seam pre-treatment required	Apply Henry® 289 White Roofing Sealant in accordance with the product TDS at ⅛" thick (125 wet mils), extend 2" minimum each side of seam.
Option #2	Apply Seal-Tek Micro-Fibers in accordance with the product TDS at ⅛" thick (125 wet mils), extend 3" minimum each side of seam.	Apply Seal-Tek Micro-Fibers in accordance with the product TDS at ⅛" thick (125 wet mils), extend 2" minimum each side of seam.	No seam pre-treatment required	Apply Henry® 295 Metal Seam Sealer in accordance with the product TDS at ⅛" thick (125 wet mils), extend 2" minimum each side of seam.

Roof curbs, parapets and pipe penetrations for MB/BUR, Single Ply and Metal roofs			
Flashing Options	**MB/BUR**	**Single Ply**	**Metal**
Option #1	Apply Henry® 289 White Roofing Sealant using a brush or trowel at ⅛" thick (125 wet mils), extend 4" minimum onto horizontal/vertical surfaces.	Apply Henry® 289 White Roofing Sealant using a brush or trowel at ⅛" thick (125 wet mils), extend 4" minimum onto horizontal/vertical surfaces.	Apply Henry® 295 Metal Seam Sealer or Henry 289 at ⅛" thick (125 wet mils), extend 4" minimum onto horizontal/vertical surfaces.
Option #2	Apply Seal-Tek Micro-Fibers using a brush at ⅛" thick (125 wet mils), extend 4" minimum onto horizontal/vertical surfaces.		
Fastener heads for metal roofs and metal components on MB/BUR, single ply roofs			
MB/BUR		**Single Ply**	**Metal**
Completely encapsulate fastener heads with Henry® 289 White Roofing Sealant.		Completely encapsulate fastener heads with Henry® 289 White Roofing Sealant.	Completely encapsulate fastener heads Henry® 295 Metal Seam Sealer or Henry 289.
Drains for MB/BUR and Single Ply roofs			
1. Remove and clean strainer, ring and other drain components. 2. Apply Henry® 289 White Roofing Sealant using a stiff bristled brush or sealant knife at 1/8" thick (125 mils) into the drain hole and completely encapsulating the drain bowl. 3. Install one layer of acrylic roof coating at 2 gallons per square (32 wet mils), starting from the drain bowl edge, extend 14" minimum beyond drain. 4. Fully embed Henry® 195 Polyester Fabric into roof coating, extend 12" beyond drain hole. Brush or roll fabric for proper adhesion and remove all voids. 5. Apply second layer of acrylic roof coating over fabric at 2 gallons per square (32 wet mils); ensure fabric is fully coated and extend roof coating 14" minimum beyond drain.			

STEP 3: Roof coating application

I. Application of roof coating: Refer to the Coverage Rate Chart for warranted minimum requirements.

A. Mix acrylic roof coating with drill and mixer blade prior to use until consistent viscosity is achieved.

B. Clean/prepare substrate in accordance with **Step 2: Substrate preparation** of this application guide.

C. Refer to **coverage rate chart** for roof coating assembly configuration and coverage rates.

D. Install acrylic roof coating base coat, extend 8" minimum up vertical surfaces; ensure coating is clean and dry prior to subsequent layer.

E. Install acrylic roof coating top coat, extend 8" minimum up vertical surfaces; install perpendicular to cured base coat.

II. Walkways (optional):

A. Ensure substrate is clean in accordance with **Step 2: Substrate preparation** of this application guide prior to coating application.

B. Apply additional acrylic roof coating at traffic areas at a minimum 1 gallon per square (16 wet mils).

C. Apply granules uniformly into wet roof coating at a rate of 20-30 pounds per square.

D. Allow roof coating to dry.

E. Remove loose particles from roof to avoid clogging drain.

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