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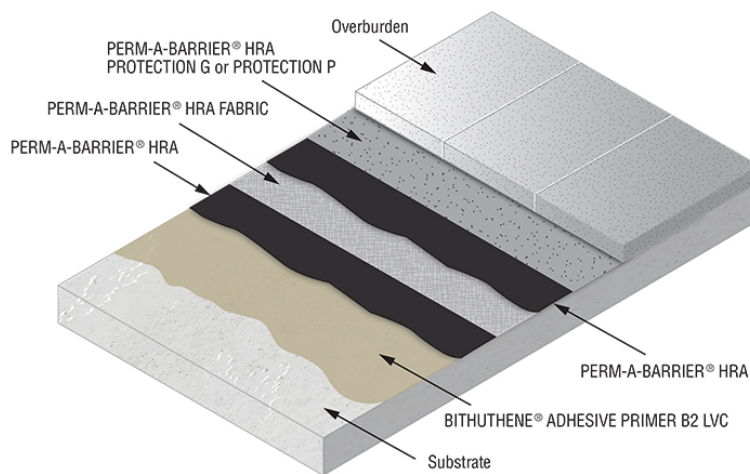
# PERM-A-BARRIER® HRA Data Sheet

Hot Rubberized Asphalt Membrane for Bituminous Waterproofing Systems

## Product Description

PERM-A-BARRIER® HRA is a single component, hot-applied rubberized asphalt for use on horizontal decks, planters, roofs, and other applications requiring a robust monolithic waterproofing system. It is composed of premium asphalt, synthetic rubbers, and stabilizing fillers. This blend of materials produces a compound that is very resilient, durable, and displays excellent adhesive properties.

For other HRA system products see the individual product data sheets.



## Product Advantages

- Robust polyester reinforced 215 mil (5.5 mm) waterproofing system
- Meets or exceeds CAN/CGSB-37.50
- Compatible with a variety of substrates
- Fully adhered, seamless, and monolithic.
- Accommodates construction schedules - can be installed at temperatures as low as 0°F (-18°C), provided surface is clean, dry, free of ice, snow, and frost. Refer to GCP cold weather application guideline.
- Contains 100% solids
- Minimum 5% recycled content
- Use under pavers, concrete slabs, green and other overburden systems

## System Components

PERM-A-BARRIER® HRA – Hot Rubber Membrane

PERM-A-BARRIER® HRA FABRIC– Polyester Reinforcement

PERM-A-BARRIER® HRA NEOPRENE 12” x 100’ – Neoprene for Flashing

PERM-A-BARRIER® HRA NEOPRENE 6” x 100’ – Neoprene for Flashing

PERM-A-BARRIER® HRA PROTECTION G – Fiberglass Protection Sheet

PERM-A-BARRIER® HRA PROTECTION P – Polyester Protection Sheet

BITUTHENE® ADHESIVE PRIMER B2 LVC – Primer

PERM-A-BARRIER® HRA CAP – Cap Sheet for Wall Flashing

## Packaging

PERM-A-BARRIER® HRA is supplied in 30-pound wrapped blocks which are packaged in recyclable cardboard boxes. The product and wrapping is added directly into the melter without the cardboard

## Safety & Handling

PERM-A-BARRIER® products must be handled properly. Do not handle until all safety precautions and instructions have been read and understood. Refer to product label and SDS before use. SDSs can be obtained from [www.gcpat.com](http://www.gcpat.com) or by contacting your local representative.

Since these products are heated to elevated temperatures, it is essential that operations be conducted safely. All personnel need to be aware of the hazards of using hot-applied materials and safety precautions. All workers should use the required Personal Protective Equipment (PPE) when working with PERM-A-BARRIER HRA. Wear safety glasses with side shields (or goggles), wear appropriate chemical resistant gloves and clothing. When handling hot material, use heat resistant gloves. Use of an impervious apron is recommended. In case of insufficient ventilation, wear suitable respiratory equipment.

If hot product gets into eyes, flush the eye with water for 15 minutes and see a physician immediately. For burns from molten product, immediately submerge the affected area in water (the cooler the better) to cool as quickly as possible. Do not use solvents to remove the product and do not peel solidified product from skin. Remove product using mineral oil, soap, and water. For severe burns, seek immediate medical attention. If inhaled, remove person from the source and assist breathing if necessary. Seek medical attention if breathing is stopped or affected. If ingested, induce vomiting.

## STORAGE

PERM-A-BARRIER HRA should be stored off the ground on a dry level surface with good drainage and completely protected with a weather-resistant covering. If this covering is damaged boxes may get wet, lose strength, and crush. If using pallets for storage, do not double stack as crushing of bottom boxes may occur. Product properties are not affected by packaging deterioration. PERM-A-BARRIER HRA has a shelf life of 1 year.

**Weather:**

Installation of PERM-A-BARRIER HRA waterproofing system shall be undertaken only when precipitation has not occurred during the previous 48 hours and is not imminent. Minimum ambient and substrate surface temperature required is 40°F (5°C) and rising, can be installed at temperatures as low as 0°F (-18°C), provided surface is clean, dry, free of ice, snow, and frost. Refer to GCP cold weather application guideline. PERM-A-BARRIER HRA is not intended to be applied on lightweight insulating concrete. For installation on structural lightweight concrete consult GCP Technical.

**Equipment:**

Melter: Material is to be heated in a thermostatically controlled double jacketed melter that uses oil as a heat transfer medium and is equipped with a mechanically operated agitator. Melter must be equipped with two devices that monitor both asphalt and heating oil temperature with an accuracy of  $\pm 2^\circ\text{C}$ . Temperature of the hot rubber must be 380°F - 400°F (193°C - 204°C). Do not use direct heat to melt PERM-A-BARRIER HRA. A separate job site inferred thermometer with an accuracy of  $\pm 2^\circ\text{C}$  must be available to verify the material temperature coming from the melter and at the point of application.

**Surface Preparation:**

Substrates must be structurally clean, dry, sound, smooth, free of rust, paint, and laitance and meet or exceed minimum requirements of substrate manufacturer and local codes. New concrete shall be cured not less than 14 days depending on the curing rate of the concrete. The moisture condition of the concrete surface shall be 5% or less and sufficiently dry to prevent vaporization of moisture and blistering during application of the primer and membrane. The substrate surface should meet CSP 3-5 and have a light broom or wood float finish. If curing compounds are used or contaminants are in the concrete, shot blasting may be required to prepare the surface.

All defects in concrete surfaces, cracks, delamination, and spalled areas shall be repaired with a suitable patching material and cured to the patching manufacturer's specification. All protrusions, ridges, trowel marks and sharp edges shall be removed by grinding. Protrusions shall be blunt and not exceed 5 mm (200 mils) and depressions shall not exceed 10 mm (400 mils).

**Priming:**

Lightly spray or roll apply BITUTHENE® ADHESIVE PRIMER B2 LVC at a rate of 700-900 sft/gal. Allow primer to cure until dry. Do not use excess primer or let primer puddle. For details, please refer to BITUTHENE® ADHESIVE PRIMER B2 LVC data sheet.

**Details:**

Substrate detail work should be done prior to application of the waterproofing membrane per manufacturer's instruction.

Waterproofing of joints, cracks, segment joints and shear keys: Apply a coat of hot PERM-A-BARRIER HRA waterproofing membrane 118 mil (3 mm) thick and 8" (203.2 mm) wide on either side of joints, cracks, or shear keys. For all filled cracks, precast segment joints, and joints with gaps less than ¼" (6.4 mm), apply a 12" (305 mm) wide piece of PERM-A-BARRIER HRA FABRIC into the hot rubber. For cracks larger than ¼" (6.4 mm) apply a 12" (305 mm) wide piece of PERM-A-BARRIER HRA NEOPRENE into the hot rubber. Consult GCP Technical for use of expansion joints for larger cracks. Overlap ends of pieces by 4" (101.6 mm) making sure adequate hot rubber is between the laps.

Penetrations, base flashings, and other similar details can be installed per GCP's instructions before or in sequence with the primary waterproofing layer using PERM-A-BARRIER HRA FABRIC or PERM-A-BARRIER HRA NEOPRENE to reinforce the hot rubber or PERM-A-BARRIER HRA PROTECTION G as a base ply.

## Application of Primary Waterproofing:

PERM-A-BARRIER HRA shall be continuously agitated until the material can be drawn free, flowing, and lump free from the melter at a temperature of 380°F-400°F (193°C-204°C). Lower temperatures may result in difficult to handle material and improper adhesion. Ensure hot rubber is fully bonded to the primed substrate.

To the primed substrate and all pre-installed detail work apply a monolithic base layer of PERM-A-BARRIER HRA at a minimum 90 mils (2.3mm) thick. Immediately embed PERM-A-BARRIER HRA FABRIC into this base layer while it is still hot, flowable, and tacky making sure to overlap the reinforcement by a minimum 2" (50.8 mm) and ensuring waterproofing is between the lap layers. Using the application squeegee or broom remove any trapped air from under the reinforcement. Apply a top layer of PERM-A-BARRIER HRA at 125 mils (3.2mm) to fully encapsulate the FABRIC within the hot rubber. While top layer is hot and tacky install a protection layer of PERM-A-BARRIER HRA PROTECTION G or PERM-A-BARRIER HRA PROTECTION P. Side laps to be 2" (50.8 mm) and end laps to be 4" (101.6 mm). Ensure sufficient waterproofing is between laps. If system is to be left indefinitely exposed install PERM-A-BARRIER HRA CAP in place of the protection sheet. The side laps of the cap sheet are to be 3" (76.2 mm) and end laps 6" (152.4 mm). Ensure sufficient PERM-A-BARRIER HRA is applied between laps.

## Typical Property Data

Test Description	Test Method	Values
Application Temperature, F	CGSB 37.50-M89	380° - 400°F (193° - 204°C)
Flow, mm @ 140°F	CGSB 37.50-M89, ASTM D5329	0
Softening point °C	ASTM D36	98°C (209°F) Min
Adhesion rating	CGSB 37.50-M89	pass
Cone penetration, 77°F	CGSB 37.50-M89, ASTM D5329	81
Cone penetration, 122°F	CGSB 37.50-M89, ASTM D5329	145
Toughness, joule	CGSB 37.50-M89	19.4
Toughness ratio	CGSB 37.50-M89	.052
Adhesion rating	CGSB 37.50-M89	pass
Water vapor permeance, perms (ng/Pa.m <sup>2</sup> .s)	CGSB 37.50-M89, ASTM E96-E	1

Water absorption, g	CGSB 37.50-M89	0.13 gain
Water resistance (pinhole, delamination, blistering, etc.)	CGSB 37.50-M89	pass
Low temperature flexibility, -25°C (-13°F)	CGSB 37.50-M89	pass
Crack bridging, -25°C (-13°F)	CGSB 37.50-M89	pass
Heat stability, 5hrs	CGSB 37.50-M89	pass
Viscosity at application temperature	CGSB 37.50-M89	4
Bond to concrete, OF	ASTM D5329	Pass
Resilience	ASTM D5329	30%
Hydrostatic pressure resistance, psi	ASTM D751-A1	119
Hydrostatic pressure resistance, 100 psi	ASTM D5385	100
Flash point, C.O.C., F	CGSB 37.50-M89, ASTM D92	>500 °F
Recycled Content		5% Minimum

\*NOTE: Published results are nominal production values confirmed by independent laboratory testing.

### TECHNICAL ASSISTANCE & SERVICES

GCP provides technical assistance in the product selection, specification, and application guidelines for all GCP HRA systems. Field representatives are available for consultation in each region.

For more information, contact GCP Technical Services

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# PERM-A-BARRIER® HRA FABRIC Data Sheet

Polyester Reinforcement for Waterproofing Systems

## Product Description

PERM-A-BARRIER® HRA FABRIC is a spunbonded polyester fabric valued for strength when used as the reinforcement in PERM-A-BARRIER HRA waterproofing systems. It has excellent properties which enhance the resilience to stresses on the waterproofing system.

For other HRA system products see the individual product data sheets

## Product Advantages

- Excellent resistance to stress
- Good conformability on various surface profiles
- Superior tear and puncture resistance

## System Components

PERM-A-BARRIER® HRA – Hot Rubber Membrane

PERM-A-BARRIER® HRA FABRIC– Polyester Reinforcement

PERM-A-BARRIER® HRA NEOPRENE 12" x 100' – Neoprene for Flashing

PERM-A-BARRIER® HRA NEOPRENE 6" x 100' – Neoprene for Flashing

PERM-A-BARRIER® HRA PROTECTION G – Fiberglass Protection Sheet

PERM-A-BARRIER® HRA PROTECTION P – Polyester Protection Sheet

BITUTHENE® ADHESIVE PRIMER B2 LVC – Primer

PERM-A-BARRIER® HRA CAP – Cap Sheet for Wall Flashing

## Safety & Handling

PERM-A-BARRIER® products must be handled properly. Do not handle until all safety precautions and instructions have been read and understood. Refer to product label and SDS before use. SDSs can be obtained from [www.gcpat.com](http://www.gcpat.com) or by contacting your local representative.

## APPLICATION

PERM-A-BARRIER HRA FABRIC must be applied in accordance with GCP installation procedures. Do not attempt application if ice, snow, moisture, or dew are present or inclement weather is expected. The following information is intended for general information purposes only and is not all-inclusive.

Using a flat squeegee, install PERM-A-BARRIER HRA to the properly prepared and primed substrate at a minimum 90 mils (2.3 mm) thick. While hot and tacky place the PERM-A-BARRIER HRA FABRIC in the hot rubberized asphalt and work air pockets from under the reinforcement by using pressure from a broom or the application squeegee. PERM-A-BARRIER HRA will begin to saturate the fabric from below. Pour additional PERM-A-BARRIER HRA over the reinforcement and squeegee to a minimum 125 mils (3.2 mm) to fully encapsulate the PERM-A-BARRIER HRA FABRIC within the hot rubberized asphalt. Overlap fabric side laps a minimum of 2 inches (50.8 mm) and end laps a minimum of 4" (101.6 mm). Ensure overlaps are secured tightly with hot rubberized asphalt.

Cold weather applications require special handling to prevent damage to the rolls and ensure satisfactory installation. Do not apply waterproofing systems over improperly prepared substrates or substrates that contain moisture. Rubberized asphalt temperature in the melter must be 380° -400°F (193° -204°C) to ensure proper adhesion.

## PHYSICAL PROPERTIES

Property	Test Method	Results*
Width		3 ft (.91 m)
Length		750 ft (228.6 m)
Coverage		2250 sq ft (209 sq m)
Color		White
Unit Weight (oz/sq yd)	ASTM D3776-96	1.35
Thickness (mil / mm)	ASTM D1777-96	9.7 mil (0.25 mm)
Sheet Grab Tensile (MD)	ASTM D4632-96	29 lb
Sheet Trapezoid Tear (MD)	ASTM D1117-98	5.9 lb

## TECHNICAL ASSISTANCE & SERVICES

GCP provides technical assistance in the product selection, specification, and application guidelines for all GCP HRA systems. Field representatives are available for consultation in each region.

For more information, contact GCP Technical Services at 800-396-8134 x2

**North America customer service: 1-877-4AD-MIX (1-877-423-6491)**

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# PERM-A-BARRIER® HRA PROTECTION G Data Sheet

SBS-Modified Protection Sheet Reinforced with Fiberglass for Waterproofing Systems

## Product Description

PERM-A-BARRIER® HRA PROTECTION G is a SBS modified membrane reinforced with a tough glass fabric for use as the top protection layer on hot rubberized asphalt waterproofing systems. It protects the underlying system from moderate abuse due to construction foot traffic and overburden. Additionally, this membrane may be used as the base ply in vertical two ply flashings.

For other HRA system products see the individual product data sheets

## Product Details

PERM-A-BARRIER HRA PROTECTION G is manufactured on a strong fiberglass reinforced mat that receives a heavy coating of superior SBS-modified bitumen compound. It is manufactured on state-of-the-art, dedicated lines that were exclusively designed to produce modified bitumen products.

Roll Dimensions	39¾" X 49' 6"
Nominal Coverage	150 sf/roll
Approximate Weight	88 lbs. per roll
Top Surface	Fine sand release agent
Back Surface	Fine sand release agent
Applicable Standards	Meets ASTM D6163 Grade S, Type I

## System Components

- PERM-A-BARRIER® HRA – Hot Rubber Membrane
- PERM-A-BARRIER® HRA FABRIC– Polyester Reinforcement
- PERM-A-BARRIER® HRA NEOPRENE 12" x 100' – Neoprene for Flashing
- PERM-A-BARRIER® HRA NEOPRENE 6" x 100' – Neoprene for Flashing
- PERM-A-BARRIER® HRA PROTECTION G – Fiberglass Protection Sheet
- PERM-A-BARRIER® HRA PROTECTION P – Polyester Protection Sheet
- BITUTHENE® ADHESIVE PRIMER B2 LVC
- PERM-A-BARRIER® HRA CAP – Cap Sheet for Wall Flashing

## Safety & Handling

PERM-A-BARRIER® products must be handled properly. Do not handle until all safety precautions and instructions have been read and understood. Refer to product label and SDS before use. SDSs can be obtained from [www.gcpat.com](http://www.gcpat.com) or by contacting your local representative.

## STORAGE & USE

Rolls should be stored upright off the ground and completely protected from the weather. Substrates must be structurally sound, dry, smooth, and meet or exceed minimum requirements of local codes and GCP. Do not attempt application if ice, snow, moisture, or dew are present or inclement weather is expected.

## APPLICATION

PERM-A-BARRIER HRA PROTECTION G must be applied in accordance with GCP installation procedures. The following information is intended for general information purposes only and is not all-inclusive.

When used as a protection layer, PERM-A-BARRIER HRA PROTECTION G is installed in a shingle pattern to promote drainage. Install membrane while the PERM-A-BARRIER HRA is hot and has a tacky consistency. Overlap protection course side laps a minimum of 2" (50.8 mm) and end laps a minimum of 4" (101.6 mm). Ensure overlaps are secured tightly with hot rubberized asphalt.

When used as a base membrane in vertical flashing applications, substrates to receive the membrane must be firmly attached, smooth, dry, clean, and free of sharp projections and depressions. Substrates requiring priming must be primed with BITUTHENE® ADHESIVE PRIMER B2 LVC and allowed to dry. Install PERM-A-BARRIER HRA PROTECTION G in a solid mopping of hot rubberized asphalt with 3" (76.2 mm) side side laps and membrane extending a minimum of 4" (101.6 mm) into the field. Ensure overlaps are secured and fully adhered. No additional HRA material is needed.

Cold weather applications require special handling to prevent damage to the rolls and ensure satisfactory installation. Do not apply waterproofing systems over improperly prepared substrates or substrates that contain moisture. Rubberized asphalt temperature in the melter must be 380°-400°F (193°-204°C) to ensure proper adhesion.

## PHYSICAL PROPERTIES

Test Description	Test Method	Results*
Softening Point	ASTM D36	260°F
Tensile Strength	ASTM D5147	60/60 lbs./in.
	@ 73.4 +/- 3.6°F MD/XD	135/125 lbs./in.
	@ 0 +/- 3.6°F MD/XD	

Elongation	ASTM D5147	4%/4%
	@ 73.4 +/- 3.6°F MD/XD	4%/4%
	@ 0 +/- 3.6°F MD/XD	
Dimensional Stability	ASTM D5147 MD/XD	0.1%/0.1% MAX
Low-Temperature Flex	ASTM D5147	Pass @ -20°F
Compound Stability	ASTM D5147	250°F
Thickness	ASTM D5147	2.3 mm (91 mils)
Tear Strength	ASTM D5147	115/120 lbs
	@ 73.4 +/- 3.6°F MD/XD	

\*NOTE: Published results are nominal production values confirmed by independent laboratory testing.

## TECHNICAL ASSISTANCE & SERVICES

GCP provides technical assistance in the product selection, specification and application guidelines for all GCP HRA systems. Field representatives are available for consultation in each region.

For more information, contact GCP Technical Services.

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# PERM-A-BARRIER® HRA PROTECTION P Data Sheet

SBS-Modified Protection Sheet Reinforced with Polyester for Waterproofing Systems

## Product Description

PERM-A-BARRIER® HRA PROTECTION P is a SBS modified membrane reinforced with a stress-resistant polyester fabric for use as the top protection layer on hot rubberized asphalt waterproofing systems. It protects the underlying system from moderate abuse due to construction foot traffic and overburden.

For other HRA system products see the individual product data sheets

## Product Details

PERM-A-BARRIER HRA PROTECTION P is manufactured on a high performance, stress-resistant polyester mat that is impregnated and coated with a superior SBS-modified bitumen compound and is lightly surfaced with a mineral release agent. The polyester mat provides excellent strength, tear, and puncture resistance.

Roll Dimensions	39¾" X 64' 3"
Nominal Coverage	200 sf/roll
Approximate Weight	89 lbs. per roll
Top Surface	Fine sand release agent
Back Surface	Fine sand release agent
Applicable Standards	Meets ASTM D4601, Type II

## System Components

PERM-A-BARRIER® HRA – Hot Rubber Membrane

PERM-A-BARRIER® HRA FABRIC– Polyester Reinforcement

PERM-A-BARRIER® HRA NEOPRENE 12" x 100' – Neoprene for Flashing

PERM-A-BARRIER® HRA NEOPRENE 6" x 100' – Neoprene for Flashing

PERM-A-BARRIER® HRA PROTECTION G – Fiberglass Protection Sheet

PERM-A-BARRIER® HRA PROTECTION P – Polyester Protection Sheet

BITUTHENE® ADHESIVE PRIMER B2 LVC – Primer

PERM-A-BARRIER® HRA CAP – Cap Sheet for Wall Flashing

## Safety & Handling

PERM-A-BARRIER® products must be handled properly. Do not handle until all safety precautions and instructions have been read and understood. Refer to product label and SDS before use. SDSs can be obtained from [www.gcpat.com](http://www.gcpat.com) or by contacting your local representative.

## STORAGE & USE

Rolls should be stored upright off the ground and completely protected from the weather. Substrates must be structurally sound, dry, smooth, and meet or exceed minimum requirements of local codes and GCP. Do not attempt application if ice, snow, moisture, or dew are present or inclement weather is expected.

## APPLICATION

PERM-A-BARRIER HRA PROTECTION P must be applied in accordance with GCP installation procedures. The following information is intended for general information purposes only and is not all-inclusive.

PERM-A-BARRIER HRA PROTECTION P is installed in a shingle pattern to promote drainage. Install membrane while the PERM-A-BARRIER HRA is hot and has a tacky consistency. Overlap protection course side laps a minimum of 2" (50.8 mm) and end laps a minimum 4" (101.6 mm). Ensure overlaps are secured and fully adhered. No additional HRA material is needed.

Cold weather applications require special handling to prevent damage to the rolls and ensure satisfactory installation. Do not apply waterproofing systems over improperly prepared substrates or substrates that contain moisture. Rubberized asphalt temperature in the melter must be 380° -400°F (193° -204°C) to ensure proper adhesion.

## PHYSICAL PROPERTIES

Test Description	Test Method	Results*
Thickness	ASTM D5147	2.0 mm (79 mils)
Tensile Strength	ASTM D5147 MD/XD	85/60 lbs./in.
Elongation	ASTM D5147 MD/XD	45%/60%
Tear Strength	ASTM D5147 MD/XD	125/85 lbs.

\*NOTE: Published results are nominal production values confirmed by independent laboratory testing.

## TECHNICAL ASSISTANCE & SERVICES

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Last Updated: 2024-11-18

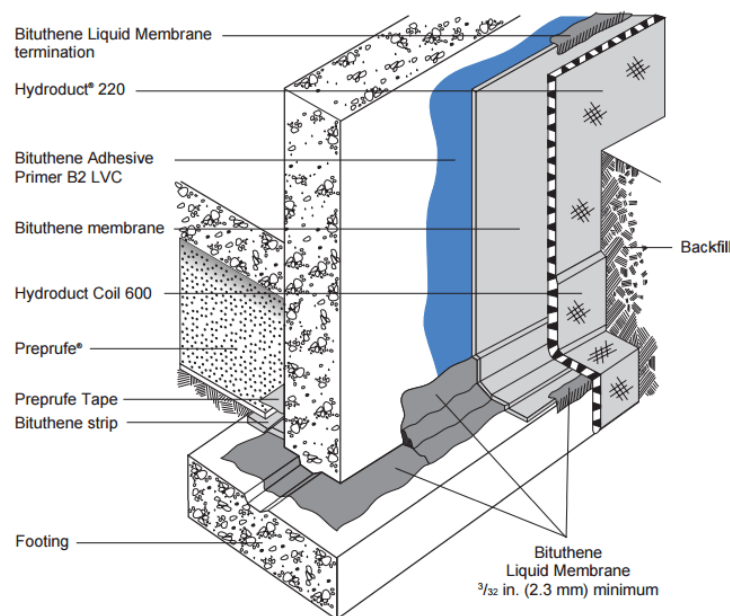
[gcpat.com/solutions/products/perm-a-barrier-hra-waterproofing-system/perm-a-barrier-hra-protection-p-data](http://gcpat.com/solutions/products/perm-a-barrier-hra-waterproofing-system/perm-a-barrier-hra-protection-p-data)

# BITUTHENE® Adhesive Primer B2 LVC Data Sheet

Specially formulated low VOC primer for use with GCP self-adhered membranes on green concrete or damp substrates

## Product Description

BITUTHENE® Adhesive Primer B2 LVC is a low VOC primer in solvent specially formulated to provide good initial adhesion of GCP self-adhered membranes. In addition, its formulation promotes the adhesion of GCP self-adhered membranes to green concrete and damp surfaces. The VOC (Volatile Organic Compound) content is <200 g/L and is compliant with all state and local VOC requirements for adhesives and sealants. Architectural and industrial maintenance regulations limit the VOC content in products classified as adhesive primers. Refer to technical letters at [gcpat.com](http://gcpat.com) for the most current list of allowable limits.



## Use

BITUTHENE® Adhesive Primer B2 LVC is used to prime green concrete (less than seven day cure for normal structural concrete). It is also used to prime damp concrete, masonry, gypsum sheathing or wood surfaces on which GCP self-adhered membranes will be applied.

BITUTHENE® Adhesive Primer B2 LVC is used for vertical and horizontal applications at 25 °F (-4 °C) or above.

## Application Procedures

### Safety, Storage and Handling Information

GCP products must be handled properly. Vapors from solvent-based primers and mastic are harmful and flammable. For these products, the best available information on safe handling, storage, personal protection, health and environmental considerations has been gathered. SDS (Safety Data Sheet) are available at [gcpat.com](http://gcpat.com) and users should acquaint themselves with this information. Carefully read detailed precaution statements on product labels and the SDS before use.

### Supply

BITUTHENE® PRIMER B2 PROPERTY	VALUE
Unit Size	5 gal (18.9 L) pail
Weight	44 lbs (20 kg)/pail
Units per pallet	48 pails
Coverage	325–425 ft <sup>2</sup> /gal (7.5–10.0 m <sup>2</sup> /L)

BITUTHENE® Adhesive Primer B2 LVC is subject to a 18 months standard shelf life provided it is stored as per GCP recommendation.

### Product Application

BITUTHENE® Adhesive Primer B2 LVC may be applied by roller or brush. Use a heavy nap roller made of natural material, such as lamb's wool.

Stir until a uniform color and consistency is achieved.

Apply it to clean, dirt free, frost-free surfaces at an approximate coverage rate of 325–425 ft<sup>2</sup>/gal (7.5–10.0 m<sup>2</sup>/L). Do not apply to frozen concrete or to areas with standing or visible water. Do not use during wet weather. Allow BITUTHENE® Adhesive Primer B2 LVC to dry one hour or until tack-free. Dry time may be longer in cold temperatures. Deep puddles of primer should be avoided as this will lengthen drying time. Rollers or brushes should be dipped into pans. Avoid pouring primer directly onto a horizontal substrate. Do not apply directly to GCP self-adhered membrane.

In general, priming should be limited to an area that can be covered with membrane within 24 hours. Areas that accumulate significant amounts of dust or dirt must be reprimed before membrane is applied.

Although it may be used on green concrete and damp surfaces, moisture may become trapped under the membrane. This may result in blistering, particularly on warm, sunny days. Therefore, cover the membrane as soon as possible to minimize blistering. If blistering occurs, allow membrane to cool and re-roll with heavy roller. Blisters over 4 in. (100 mm) in diameter should be cut and patched.

Clean tools with mineral spirits at the end of each day. Mineral spirits is a combustible liquid and should be used only in accordance with the manufacturer's safety recommendations. **Do not use solvents to clean hands or skin.**



[gcpat.com](http://gcpat.com) | North America Customer Service: 1-866-333-3726

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[gcpat.com/solutions/products/bituthene-post-applied-waterproofing/bituthene-adhesive-primer-b2-lvc](http://gcpat.com/solutions/products/bituthene-post-applied-waterproofing/bituthene-adhesive-primer-b2-lvc)

# PERM-A-BARRIER® HRA CAP Data Sheet

SBS Modified Bitumen Cap Membrane with Mineral Surface for Use in Waterproofing Systems

## Product Description

PERM-A-BARRIER® HRA CAP is a polyester reinforced SBS membrane designed for use as the top ply on wall and base flashings for hot rubberized asphalt waterproofing systems. It may also be used as the top surfacing in the field if a hot rubberized asphalt system is to be left exposed.

For other HRA system products see the individual product data sheets

## Product Details

PERM-A-BARRIER HRA CAP is manufactured on state-of-the-art, dedicated lines that were exclusively designed to produce modified bitumen products. PERM-A-BARRIER HRA CAP is constructed with a high-performance, stress-resistant polyester mat that is impregnated and coated with a superior SBS-modified bitumen compound. It is surfaced with ceramic granules on the top side which protects the membrane from abuse and UV degradation.

Roll Dimensions	39¾" X 32'10"
Nominal Coverage	One square
Approximate Weight	93 lbs. per roll
Top Surface	Mineral Granules (Black or White)
Back Surface	Fine sand release agent
Applicable Standards	Meets ASTM D6164, Grade G, Type I.

## System Components

PERM-A-BARRIER® HRA – Hot Rubber Membrane  
 PERM-A-BARRIER® HRA FABRIC– Polyester Reinforcement  
 PERM-A-BARRIER® HRA NEOPRENE 12" x 100' – Neoprene for Flashing  
 PERM-A-BARRIER® HRA NEOPRENE 6" x 100' – Neoprene for Flashing  
 PERM-A-BARRIER® HRA PROTECTION G – Fiberglass Protection Sheet  
 PERM-A-BARRIER® HRA PROTECTION P – Polyester Protection Sheet  
 BITUTHENE® ADHESIVE PRIMER B2 LVC – Primer  
 PERM-A-BARRIER® HRA CAP – Cap Sheet for Wall Flashing

## Safety & Handling

PERM-A-BARRIER® products must be handled properly. Do not handle until all safety precautions and instructions have been read and understood. Refer to product label and SDS before use. SDSs can be obtained from [www.gcpat.com](http://www.gcpat.com) or your local representative.

## STORAGE & USE

Rolls should be stored upright off the ground and completely protected from the weather. Substrates must be structurally sound, dry, smooth, and meet or exceed minimum requirements of local codes and GCP. Do not attempt application if ice, snow, moisture, or dew are present or inclement weather is expected. Consult GCP or your local representative for additional specifications and precautions.

## APPLICATION

PERM-A-BARRIER HRA CAP must be applied in accordance with GCP installation procedures. Ensure substrates to receive a PERM-A-BARRIER HRA CAP are smooth, dry, and clean. The following information is intended for general information purposes only and is not all-inclusive.

For flashing applications using PERM-A-BARRIER HRA PROTECTION G as the base membrane, install it in accordance with manufactures requirements. Over the PERM-A-BARRIER HRA PROTECTION G, install one ply of PERM-A-BARRIER HRA CAP lapping it 3" (76.2 mm) on sides and extending membrane a minimum of 6" (152.4 mm) into the field and at least 2" (50.8 mm) past base membrane. Apply base and cap membranes in such a manner as to provide and maintain a minimum 6" (152.4 mm) offset between side and end laps of of each sheet. PERM-A-BARRIER HRA CAP side and end laps must be fully adhered in a complete mopping of hot rubberized asphalt with asphalt extending approximately  $\frac{3}{8}$ " (9.4 mm) beyond lap edge.

PERM-A-BARRIER HRA CAP is also used as the top finishing membrane on hot rubberized asphalt flashings reinforced with neoprene or polyester without the need for a modified bitumen base membrane. Over the neoprene or polyester fabric reinforced base layer install one ply of PERM-A-BARRIER HRA CAP in a solid application of hot rubberized asphalt. Lap it 3" (76.2 mm) on sides and extend membrane a minimum of 6" (152.4 mm) into the field. Ensure asphalt extends approximately  $\frac{3}{8}$ " (9.4 mm) beyond lap edges.

PERM-A-BARRIER HRA CAP can also be used in the field as a final surfacing or protection sheet. Membrane is to be lapped 3" (76.2 mm) on sides and 6" (152.4 mm) on the ends with end laps staggered not less than 3" (76.2 mm) apart. Laps must be fully adhered in a complete mopping of hot rubberized asphalt with asphalt extending approximately  $\frac{3}{8}$ " (9.4 mm) beyond lap edge.

Cold weather applications require special handling to prevent damage to the rolls and ensure satisfactory installation. Do not apply waterproofing systems over improperly prepared substrates or substrates that contain moisture. Rubberized asphalt temperature the melter must be 380°-400°F (193°-204°C) to ensure proper adhesion.

## PHYSICAL PROPERTIES

Test Description	Test Method	Results*
Softening Point	ASTM D36	260°F

Tensile Strength	ASTM D5147	90/65 lbs./in.
	@ 73.4 +/- 3.6°F MD/XD	125/75 lbs./in.
	@ 0 +/- 3.6°F MD/XD	
Elongation	ASTM D5147	60%/120%
	@ 73.4 +/- 3.6°F MD/XD	35%/35%
	@ 0 +/- 3.6°F MD/XD	
Dimensional Stability	ASTM D5147 MD/XD	0.1%/0.1%
Low-Temperature Flex	ASTM D5147	Pass @ -20°F
Compound Stability	ASTM D5147	250°F
Thickness	ASTM D5147	3.7 mm (145 mils)
Tear Strength	ASTM D5147	135/100 lbs.
	@ 73.4 +/- 3.6°F MD/XD	

\*NOTE: Published results are nominal production values confirmed by independent laboratory testing.

## TECHNICAL ASSISTANCE & SERVICES

GCP provides technical assistance in the product selection, specification, and application guidelines for all GCP HRA systems. Field representatives are available for consultation in each region.

For more information, contact GCP Technical Services

North America customer service: 1-877-4AD-MIX (1-877-423-6491)

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Last Updated: 2024-06-24

[gcpat.com/solutions/products/perm-a-barrier-hra-waterproofing-system/perm-a-barrier-hra-cap-data-sheet](https://www.gcpat.com/solutions/products/perm-a-barrier-hra-waterproofing-system/perm-a-barrier-hra-cap-data-sheet)

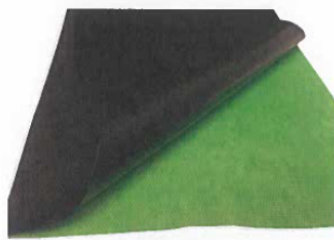
# PERM-A-BARRIER® HRA NEOPRENE Data Sheet

Uncured neoprene rubber membrane for use in bituminous waterproofing systems

## Product Description

PERM-A-BARRIER®HRA NEOPRENE is an uncured neoprene rubber membrane designed to reinforce wall, base flashings, expansion joints and other details in hot rubberized asphalt waterproofing systems.

For other HRA system products see the individual product data sheets



## Product Details

PERM-A-BARRIER HRA NEOPRENE is a thermoset neoprene rubber membrane used in conjunction with PERM-A-BARRIER HRA. PERM-A-BARRIER HRA NEOPRENE is an uncured sheet material that is easy to mold around penetrations and can be used to detail flashings, drains, transitions, irregular shapes, and expansion joints. It has excellent tensile and elongation strength and can easily withstand thermal expansion and contraction. PERM-A-BARRIER HRA NEOPRENE is typically placed within PERM-A-BARRIER HRA but can be used as a protection course in certain approved exposed conditions.

Roll Dimensions	6" x 100'
	12" x 100'
Standard Thickness	60 mils (1.5mm)
Approximate Weight	6" / 20lb, 12" / 40lb
Shelf life	maximum 9 months from the date of manufacturing

## System Components

PERM-A-BARRIER®HRA – Hot Rubber Membrane

PERM-A-BARRIER®HRA FABRIC– Polyester Reinforcement

PERM-A-BARRIER®HRA NEOPRENE 12" x 100' – Neoprene for Flashing

PERM-A-BARRIER®HRA NEOPRENE 6" x 100' – Neoprene for Flashing

PERM-A-BARRIER®HRA PROTECTION G – Fiberglass Protection Sheet

PERM-A-BARRIER®HRA PROTECTION P – Polyester Protection Sheet

BITUTHENE®ADHESIVE PRIMER B2 LVC - Primer

PERM-A-BARRIER®HRA CAP – Cap Sheet for Wall Flashing

For other Perm-A-Barrier HRA products details, see the individual product data sheet.

## Safety & Handling

PERM-A-BARRIER®products must be handled properly. Do not handle until all safety precautions and instructions have been read and understood. Refer to product label and SDS before use. SDSs can be obtained from [www.gcpat.com](http://www.gcpat.com) or by contacting your local representative.

## STORAGE & USE

Rolls should be stored upright off the ground and completely protected from the weather. Do not attempt application if ice, snow, moisture, or dew are present or inclement weather is expected. Do not use material that is 9 months old or has become inflexible and hard to mold.

## APPLICATION

Remove green protective film from top of PERM-A-BARRIER HRA NEOPRENE prior to application of membrane. Apply PERM-A-BARRIER HRA at 90 mils (2.3 mm) and while hot install the PERM-A-BARRIER HRA NEOPRENE. Mold to shape as needed to flash transitions. A minimum 2" (50.8 mm) overlap is required between sections of neoprene. PERM-A-BARRIER HRA must be applied between membrane overlaps to completely seal the joints. Cover the neoprene with additional PERM-A-BARRIER HRA at about 125 mils (3.2 mm) to fully encapsulate it within the hot rubber.

Cold weather applications require special handling to prevent damage to the rolls and ensure satisfactory installation. Do not apply waterproofing systems over improperly prepared substrates or substrates that contain moisture. Rubberized asphalt temperature in the melter must be 380° -400°F (193° -204°C) to ensure proper adhesion.

## Typical PROPERTIES after vulcanization

Test Description	Test Method	Results*
Tensile Strength	D412 Die C	1484 PSI
Elongation	D412 Die C	267%

Tear Resistance	D412 Die C	171 Lb./in
Brittleness Point @ - 40°F	D2137	Does not Break
Ozone Resistance		No Cracks @ 7 X
168 Hrs./100pphm/104°F/50% Ext.	D1149	Magnification
Water Absorption, Max. Mass 166 Hrs. @ 158°F	D471	8.50%

## TECHNICAL ASSISTANCE & SERVICES

GCP provides technical assistance in the product selection, specification, and application guidelines for all GCP HRA systems. Field representatives are available for consultation in each region.

For more information, contact GCP Technical Services

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Last Updated: 2024-06-24

[gcpat.com/solutions/products/perm-a-barrier-hra-waterproofing-system/perm-a-barrier-hra-neoprene-data-sheet](http://gcpat.com/solutions/products/perm-a-barrier-hra-waterproofing-system/perm-a-barrier-hra-neoprene-data-sheet)



# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>PERM-A-BARRIER HRA</b>
<b>Other means of identification</b>	
<b>Synonyms</b>	Hot Applied Waterproofing Membrane
<b>Recommended use</b>	Hot applied waterproofing for buried application
<b>Recommended restrictions</b>	No other uses are advised.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer</b>	
<b>Company name</b>	GCP Applied Technologies
<b>Address</b>	2325 Lakeview Pkwy Alpharetta, GA 30009 United States
<b>Telephone</b>	+1 866-333-3726
<b>E-mail</b>	Not available.
<b>Emergency phone number</b>	3E Global Incident Hotline 1 760 476 3962 1 866 519 4752 (Toll Free) Access Code: 336250

## 2. Hazard(s) identification

<b>Physical hazards</b>	Not classified.
<b>Health hazards</b>	Not classified.
<b>Environmental hazards</b>	Not classified.
<b>OSHA defined hazards</b>	Not classified.
<b>Label elements</b>	
<b>Hazard symbol</b>	None.
<b>Signal word</b>	None.
<b>Hazard statement</b>	The product does not meet the criteria for classification.
<b>Precautionary statement</b>	
<b>Prevention</b>	Observe good industrial hygiene practices.
<b>Response</b>	Take off contaminated clothing and wash it before reuse.
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	Dispose of waste and residues in accordance with local authority requirements.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	None.

## 3. Composition/information on ingredients

### Mixtures

<b>Chemical name</b>	<b>Common name and synonyms</b>	<b>CAS number</b>	<b>%</b>
Asphalt		8052-42-4	40 - 70
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC		64742-52-5	0 - 25

<b>Composition comments</b>	The exact concentrations of the above listed chemicals are being withheld as a trade secret. All concentrations are in percent by weight. Non-classification as a carcinogen is based on the non-respirable form of the product.
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## 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
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<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Direct contact with eyes may cause temporary irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Foam. Dry powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Avoid prolonged exposure. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

#### US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC (CAS 64742-52-5)	PEL	5 mg/m3	Mist.
		2000 mg/m3	
		500 ppm	

#### US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
Asphalt (CAS 8052-42-4)	TWA	0.5 mg/m3	Inhalable fume.
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC (CAS 64742-52-5)	TWA	5 mg/m3	Inhalable fraction.

**NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended**

Components	Type	Value
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC (CAS 64742-52-5)	IDLH	2500 mg/m3

**US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)**

Components	Type	Value	Form
Asphalt (CAS 8052-42-4)	Ceiling	5 mg/m3	Fume.
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC (CAS 64742-52-5)	Ceiling	1800 mg/m3	
	STEL	10 mg/m3	Mist.

**Biological limit values****ACGIH Biological Exposure Indices (BEI)**

Components	Value	Determinant	Specimen	Sampling Time
Asphalt (CAS 8052-42-4)	2.5 µg/l	1-Hydroxypyrene, with hydrolysis (1-HP)	Urine	*

\* - For sampling details, please see the source document.

**Appropriate engineering controls**

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Wear safety glasses with side shields (or goggles).

**Skin protection****Hand protection**

Wear appropriate chemical resistant gloves. When handling hot material, use heat resistant gloves.

**Other**

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties****Appearance****Physical state**

Solid.

**Form**

Solid.

**Color**

Dark brown. Black.

**Odor**

Burnt Tar.

**Odor threshold**

Not available.

**pH**

Not available.

**Melting point/freezing point**

150 - 250 °F (65.56 - 121.11 °C) ASTM D36 Softening Point

**Initial boiling point and boiling range**

>800 °F (>426.67 °C)

**Flash point**

>400.0 °F (>204.4 °C)

**Evaporation rate**

Not available.

**Flammability (solid, gas)**

Not available.

**Upper/lower flammability or explosive limits****Explosive limit - lower (%)**

Not available.

<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	>700 °F (>371.11 °C)
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.
<b>Percent volatile</b>	0 %
<b>Specific gravity</b>	1 - 1.9

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	No adverse effects due to skin contact are expected. Thermal burn hazard - contact with hot material may cause thermal burns.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics** Direct contact with eyes may cause temporary irritation.

### Information on toxicological effects

**Acute toxicity** Not known.

Components	Species	Test Results
Asphalt (CAS 8052-42-4)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 2000 mg/kg
<b>Oral</b>		
LD50	Rat	> 5000 mg/kg

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation** Due to partial or complete lack of data the classification is not possible.

### Respiratory or skin sensitization

<b>Respiratory sensitization</b>	Due to partial or complete lack of data the classification is not possible.
<b>Skin sensitization</b>	Due to partial or complete lack of data the classification is not possible.

<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	Reference to chemical component(s) listed are based on unbound respirable particles and are not generally applicable to product as supplied.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

Asphalt (CAS 8052-42-4)	2B Possibly carcinogenic to humans.
DISTILLATES (PETROLEUM), HYDROTREATED	3 Not classifiable as to carcinogenicity to humans.
HEAVY NAPHTHENIC (CAS 64742-52-5)	

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

#### US. National Toxicology Program (NTP) Report on Carcinogens

Asphalt (CAS 8052-42-4)	Known To Be Human Carcinogen.
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<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Due to partial or complete lack of data the classification is not possible.
<b>Specific target organ toxicity - repeated exposure</b>	Due to partial or complete lack of data the classification is not possible.
<b>Aspiration hazard</b>	Due to partial or complete lack of data the classification is not possible.
<b>Chronic effects</b>	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.
<b>Further information</b>	This product has no known adverse effect on human health.

## 12. Ecological information

<b>Ecotoxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Persistence and degradability</b>	No data is available on the degradability of any ingredients in the mixture.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

<b>DOT</b>	Not regulated as dangerous goods.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.

## 15. Regulatory information

<b>US federal regulations</b>	This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
<b>Toxic Substances Control Act (TSCA)</b>	All components of the mixture on the TSCA 8(b) inventory are designated "active".

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical**

<b>Classified hazard categories</b>	Yes
	Skin corrosion or irritation
	Germ cell mutagenicity
	Carcinogenicity
	Reproductive toxicity

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Asphalt (CAS 8052-42-4)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)**

Not regulated.

**US state regulations****US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Asphalt (CAS 8052-42-4)

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC (CAS 64742-52-5)

**California Proposition 65****WARNING:** This product can expose you to Asphalt, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).**California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Asphalt (CAS 8052-42-4)

Listed: January 1, 1990

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

**Issue date** 02-26-2024

**Version #** 01

**Disclaimer** GCP Applied Technologies cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

## 1. Identification

<b>Product identifier</b>	<b>PERM-A-BARRIER HRA Fabric</b>
<b>Other means of identification</b>	
<b>Product Identifier</b>	ARTICLE
<b>Synonyms</b>	Ultraseal Reinforcing Fabric
<b>Recommended use</b>	Reinforcement of HRA waterproofing membrane
<b>Recommended restrictions</b>	No other uses are advised.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer</b>	
<b>Company name</b>	GCP Applied Technologies
<b>Address</b>	2325 Lakeview Pkwy Alpharetta, GA 30009 United States
<b>Telephone</b>	+1 866-333-3726
<b>E-mail</b>	Not available.
<b>Emergency phone number</b>	3E Global Incident Hotline 1 760 476 3962 1 866 519 4752 (Toll Free) Access Code: 336250

## 2. Hazard(s) identification

This product is considered as an Article as outlined in OSHA's Hazardous Communication Standard (29 CFR 1910.1200), and thus is not required to have a Safety Data Sheet (SDS). This SDS is prepared and offered for information only. OSHA's HCS definition of "Article" means "a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees." 29 CFR 1910.1200(c).

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Poly(ethylene Terephthalate)		25038-59-9	80 - 90
Binder Resin		N/A	10 - 20
Optical Brightener		N/A	0 - 5
Siloxanes and Silicones, di-Me		63148-62-9	0 - 5

This product is an article.

## 4. First-aid measures

This product is an article and is not expected to release hazardous chemicals under normal conditions of use.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Not available.
<b>Specific hazards arising from the chemical</b>	Not applicable.
<b>Special protective equipment and precautions for firefighters</b>	Not available.

## 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Not available.
Methods and materials for containment and cleaning up	Not available.
Environmental precautions	Not available.

## 7. Handling and storage

Precautions for safe handling	Not available.
Conditions for safe storage, including any incompatibilities	Not available.

## 8. Exposure controls/personal protection

This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions. No engineering controls or personal protective equipment (PPE) are necessary.

## 9. Physical and chemical properties

### Appearance

Physical state	Solid.
Form	Solid.
Color	White.
Odor	Odorless.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	329 °F (165 °C)
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Insoluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

## 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Not available.
Possibility of hazardous reactions	Not available.
Conditions to avoid	Not available.
Incompatible materials	Not available.



**Hazardous decomposition products** Not available.

## 11. Toxicological information

This product, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards

## 12. Ecological information

This article is expected to present a low environmental risk either because use and disposal are unlikely to result in a significant release of components to the environment or because those components that may be released are expected to have insignificant environmental impact.

## 13. Disposal considerations

Dispose of contents/container in accordance with the local/regional/national/international regulations.

## 14. Transport information

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## 15. Regulatory information

This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory requirements.

## 16. Other information, including date of preparation or last revision

**Issue date** 03-18-2024

**Version #** 01

**Disclaimer** GCP Applied Technologies cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

## 1. Identification

<b>Product identifier</b>	<b>PERM-A-BARRIER HRA Protection G</b>
<b>Other means of identification</b>	
<b>Synonyms</b>	Flintlastic Base 20
<b>Recommended use</b>	Modified bitumen protection membrane for hot rubber systems
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer</b>	
<b>Company name</b>	GCP Applied Technologies
<b>Address</b>	2325 Lakeview Pkwy Alpharetta, GA 30009 United States
<b>Telephone</b>	+1 866-333-3726
<b>E-mail</b>	Not available.
<b>Emergency phone number</b>	3E Global Incident Hotline 1 760 476 3962 1 866 519 4752 (Toll Free) Access Code: 336250

## 2. Hazard(s) identification

<b>Physical hazards</b>	Not classified.
<b>Health hazards</b>	Not classified.
<b>Environmental hazards</b>	Not classified.
<b>OSHA defined hazards</b>	Not classified.
<b>Label elements</b>	
<b>Hazard symbol</b>	None.
<b>Signal word</b>	None.
<b>Hazard statement</b>	The product does not meet the criteria for classification.
<b>Precautionary statement</b>	
<b>Prevention</b>	Observe good industrial hygiene practices.
<b>Response</b>	Wash hands after handling.
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	Dispose of waste and residues in accordance with local authority requirements.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Asphalt		8052-42-4	25 - 55
Quartz		14808-60-7	5 - 35

<b>Composition comments</b>	The exact concentrations of the above listed chemicals are being withheld as a trade secret. All concentrations are in percent by weight. Non-classification as a carcinogen is based on the non-respirable form of the product.
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## 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.

<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Coughing.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Foam. Dry powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS. The product is insoluble in water.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Avoid prolonged exposure. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in a dry place. Store in a well-ventilated place.

## 8. Exposure controls/personal protection

### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

#### US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Quartz (CAS 14808-60-7)	PEL	0.05 mg/m <sup>3</sup>	Respirable dust.

#### US. OSHA Table Z-3 Permissible Exposure Limits (PEL) for Mineral Dusts (29 CFR 1910.1000)

Components	Type	Value	Form
Quartz (CAS 14808-60-7)	TWA	0.1 mg/m <sup>3</sup>	Respirable.
		2.4 mppcf	Respirable.

#### US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
Asphalt (CAS 8052-42-4)	TWA	0.5 mg/m <sup>3</sup>	Inhalable fume.
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.

#### NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Components	Type	Value
Quartz (CAS 14808-60-7)	IDLH	50 mg/m <sup>3</sup>

**US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)**

Components	Type	Value	Form
Asphalt (CAS 8052-42-4)	Ceiling	5 mg/m3	Fume.
Quartz (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.

**Biological limit values****ACGIH Biological Exposure Indices (BEI)**

Components	Value	Determinant	Specimen	Sampling Time
Asphalt (CAS 8052-42-4)	2.5 µg/l	1-Hydroxypyrene, with hydrolysis (1-HP)	Urine	*

\* - For sampling details, please see the source document.

**Appropriate engineering controls**

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin protection**

**Hand protection** Wear appropriate chemical resistant gloves.

**Other** Wear suitable protective clothing.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties****Appearance**

**Physical state** Solid.

**Form** Solid.

**Color** Black

**Odor** Petroleum-like.

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** Not available.

**Initial boiling point and boiling range** Not available.

**Flash point** Not available.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not available.

**Upper/lower flammability or explosive limits**

**Explosive limit - lower (%)** Not available.

**Explosive limit - upper (%)** Not available.

**Vapor pressure** Not available.

**Vapor density** Not available.

**Relative density** Not available.

**Solubility(ies)**

**Solubility (water)** Insoluble

**Partition coefficient (n-octanol/water)** Not available.

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity** Not available.

## Other information

<b>Explosive properties</b>	Not explosive.
<b>Explosivity</b>	Product does not present an explosion hazard.
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Powerful oxidizers. Chlorine.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics** Not available.

### Information on toxicological effects

**Acute toxicity** Not known.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Asphalt (CAS 8052-42-4)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 2000 mg/kg
<b>Oral</b>		
LD50	Rat	> 5000 mg/kg

**Skin corrosion/irritation** Due to partial or complete lack of data the classification is not possible.

**Serious eye damage/eye irritation** Due to partial or complete lack of data the classification is not possible.

### Respiratory or skin sensitization

**Respiratory sensitization** Due to partial or complete lack of data the classification is not possible.

**Skin sensitization** Due to partial or complete lack of data the classification is not possible.

**Germ cell mutagenicity** Due to partial or complete lack of data the classification is not possible.

**Carcinogenicity** Reference to chemical component(s) listed are based on unbound respirable particles and are not generally applicable to product as supplied.

### IARC Monographs. Overall Evaluation of Carcinogenicity

Asphalt (CAS 8052-42-4)	2B Possibly carcinogenic to humans.
Quartz (CAS 14808-60-7)	1 Carcinogenic to humans.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Quartz (CAS 14808-60-7)	Cancer
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### US. National Toxicology Program (NTP) Report on Carcinogens

Asphalt (CAS 8052-42-4)	Known To Be Human Carcinogen.
Quartz (CAS 14808-60-7)	Known To Be Human Carcinogen.

**Reproductive toxicity** Due to partial or complete lack of data the classification is not possible.

**Specific target organ toxicity - single exposure** Due to partial or complete lack of data the classification is not possible.

<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Due to partial or complete lack of data the classification is not possible.
<b>Chronic effects</b>	Not expected to be hazardous by OSHA criteria.

## 12. Ecological information

<b>Ecotoxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Persistence and degradability</b>	No data is available on the degradability of any ingredients in the mixture.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

<b>DOT</b>	Not regulated as dangerous goods.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.

## 15. Regulatory information

<b>US federal regulations</b>	This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.	
<b>Toxic Substances Control Act (TSCA)</b>	All components of the mixture on the TSCA 8(b) inventory are designated "active".	
<b>TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)</b>	Not regulated.	
<b>CERCLA Hazardous Substance List (40 CFR 302.4)</b>	Not listed.	
<b>SARA 304 Emergency release notification</b>	Not regulated.	
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)</b>	Quartz (CAS 14808-60-7)	
	Cancer	lung effects
	immune system effects	kidney effects
<b>Superfund Amendments and Reauthorization Act of 1986 (SARA)</b>		
<b>SARA 302 Extremely hazardous substance</b>	Not listed.	
<b>SARA 311/312 Hazardous chemical</b>	Yes	

**Classified hazard categories**Carcinogenicity  
Specific target organ toxicity (single or repeated exposure)**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Asphalt (CAS 8052-42-4)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)**

Not regulated.

**US state regulations****US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Asphalt (CAS 8052-42-4)

Quartz (CAS 14808-60-7)

**California Proposition 65****WARNING:** This product can expose you to chemicals including Asphalt, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).**California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Asphalt (CAS 8052-42-4)

Listed: January 1, 1990

Quartz (CAS 14808-60-7)

Listed: October 1, 1988

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision****Issue date** 02-15-2024**Version #** 01**Disclaimer**

GCP Applied Technologies cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.



# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>PERM-A-BARRIER HRA Protection P</b>
<b>Other means of identification</b>	
<b>Product Identifier</b>	ARTICLE
<b>Synonyms</b>	Flintlastic Poly SMS
<b>Recommended use</b>	Modified bitumen waterproofing protection sheet
<b>Recommended restrictions</b>	No other uses are advised.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer</b>	
<b>Company name</b>	GCP Applied Technologies
<b>Address</b>	2325 Lakeview Pkwy Alpharetta, GA 30009 United States
<b>Telephone</b>	+1 866-333-3726
<b>E-mail</b>	Not available.
<b>Emergency phone number</b>	3E Global Incident Hotline 1 760 476 3962 1 866 519 4752 (Toll Free) Access Code: 336250

## 2. Hazard(s) identification

This product is considered as an Article as outlined in OSHA's Hazardous Communication Standard (29 CFR 1910.1200), and thus is not required to have a Safety Data Sheet (SDS). This SDS is prepared and offered for information only. OSHA's HCS definition of "Article" means "a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees." 29 CFR 1910.1200(c).

## 3. Composition/information on ingredients

### Mixtures

<b>Chemical name</b>	<b>Common name and synonyms</b>	<b>CAS number</b>	<b>%</b>
Modified bitumen waterproofing protection sheet		NA	100

This product is an article.

## 4. First-aid measures

This product is an article and is not expected to release hazardous chemicals under normal conditions of use.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Not available.
<b>Specific hazards arising from the chemical</b>	Not applicable.
<b>Special protective equipment and precautions for firefighters</b>	Not available.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Not available.
<b>Methods and materials for containment and cleaning up</b>	Not available.



Environmental precautions Not available.

## 7. Handling and storage

Precautions for safe handling Not available.

Conditions for safe storage, including any incompatibilities Not available.

## 8. Exposure controls/personal protection

This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions. No engineering controls or personal protective equipment (PPE) are necessary.

## 9. Physical and chemical properties

Appearance Solid.

Physical state Solid.

Form Sheets.

Color Black.

Odor Odorless.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Insoluble.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

## 10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Not available.

Possibility of hazardous reactions Not available.

Conditions to avoid Not available.

Incompatible materials Not available.

Hazardous decomposition products Not available.

## 11. Toxicological information

This product, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards

## 12. Ecological information

This article is expected to present a low environmental risk either because use and disposal are unlikely to result in a significant release of components to the environment or because those components that may be released are expected to have insignificant environmental impact.

## 13. Disposal considerations

Dispose of contents/container in accordance with the local/regional/national/international regulations.

## 14. Transport information

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## 15. Regulatory information

This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory requirements.

## 16. Other information, including date of preparation or last revision

**Issue date** 04-02-2024

**Version #** 01

**Disclaimer** GCP Applied Technologies cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

## 1 Identification

### Product identifier

Trade name: *Bituthene Adhesive Primer B2 LVC*

SDS ID Number: 60028

**Relevant identified uses of the substance or mixture, and uses advised against:**  
Specialty construction product. Not intended for other uses.

### Details of the supplier of the safety data sheet

**Manufacturer/Supplier:**  
GCP Applied Technologies  
62 Whittemore Avenue  
Cambridge, MA 02140 USA

GCP Canada, Inc.  
294 Clements Road W.  
Ajax, Ontario L1S 3C6 Canada

### Information department:

Environmental Health & Safety  
USA: +1-617-876-1400 (24 hours)  
+1-800-354-5414 (8AM - 5PM) Not functional within Massachusetts  
CAN: 1-905-683-8561 (24 hours)  
Email address: msds.gcp@gcpat.com

**Transport Emergency:** Chemtrec +1-800-424-9300 (24 hours)

## 2 Hazard(s) identification

### Classification of the substance or mixture

Flammable liquid and vapor.  
Causes skin irritation.  
May cause genetic defects.  
May cause cancer.  
Causes damage to organs through prolonged or repeated exposure. May cause damage to the central nervous system through prolonged or repeated exposure.

### Label elements:

#### Hazard pictograms



GHS02 GHS07 GHS08

Danger

### Hazard statements

Flammable liquid and vapor.  
Causes skin irritation.  
May cause genetic defects.  
May cause cancer.  
Causes damage to organs through prolonged or repeated exposure. May cause damage to the central nervous system through prolonged or repeated exposure.

## Safety Data Sheet

Printing date 05/08/2018

Version Number 1.0

Reviewed on 05/08/2018

Trade name: *Bituthene Adhesive Primer B2 LVC*

(Cont. from page 1)

**Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
 Keep container tightly closed.  
 Ground/bond container and receiving equipment.  
 Take precautionary measures against static discharge.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 IF exposed or concerned: Get medical advice/attention.  
 Take off contaminated clothing and wash it before reuse.  
 If skin irritation occurs: Get medical advice/attention.  
 Store in a well-ventilated place. Keep cool.

**Hazard description:** Flammable

NFPA ratings (scale 0 - 4)



Health = 2  
 Fire = 3  
 Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = \*3  
 Flammability = 3  
 Reactivity = 0

**Other hazards****Results of PBT and vPvB assessment**

**PBT:** Not applicable.  
**vPvB:** Not applicable.

**3 Composition/information on ingredients****Chemical characterization: Mixture**

**Description:** Mixture of the hazardous substance(s) listed below with additional nonhazardous ingredients.

**Hazardous components:**

68478-07-9	Hydrocarbon Resin	30-50%
95-47-6	Xylene (o)	10-20%
8052-41-3	Stoddard solvent	2.0-5.0%
63449-39-8	Paraffin waxes and hydrocarbon waxes	1.0-2.0%
8052-42-4	Asphalt	1.0-2.0%
100-41-4	Ethylbenzene	0.1-1.0%

**Additional information:** Non-hazardous ingredients may be listed in Section 15; Right-To-Know disclosure.

**4 First-aid measures****Description of first aid measures**

**General information:** Get medical advice/attention if you feel unwell.

**After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

**After skin contact:**

Immediately wash contaminated skin with soap or mild detergent and water. If this chemical soaks clothing, immediately remove clothing and wash skin.

**After eye contact:** Rinse cautiously with water for several minutes.

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## Safety Data Sheet

Printing date 05/08/2018

Version Number 1.0

Reviewed on 05/08/2018

Trade name: *Bituthene Adhesive Primer B2 LVC*

(Cont. from page 2)

**After swallowing:**

Rinse mouth.

Do NOT induce vomiting.

**Information for doctor:****Most important symptoms and effects, both acute and delayed** No further relevant information available.**Indication of any immediate medical attention and special treatment needed** No further relevant information available.**5 Fire-fighting measures****Extinguishing media****Suitable extinguishing agents:** CO<sub>2</sub>, sand,extinguishing powder. Do not use water.**Special hazards arising from the substance or mixture** No further relevant information available.**Additional information** Collect contaminated fire fighting water separately. It must not enter the sewage system.**6 Accidental release measures****Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

**Methods and material for containment and cleaning up:**

Contain and/or absorb spill with inert material (i.e. sand, vermiculite) then place in a suitable container.

Sweep up spilled product into receptacles.

Dispose contaminated material as waste according to section 13 of the SDS.

**Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

**7 Handling and storage****Handling:****Precautions for safe handling**

Avoid contact with skin.

Prevent formation of aerosols.

Flammable mixtures with air can be formed in emptied containers. Do not puncture, cut, drill, heat or weld uncleaned drums.

**Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Use only in explosion protected area.

Protect against electrostatic charges.

Use explosion-proof apparatus / fittings and spark-proof tools.

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Trade name: *Bituthene Adhesive Primer B2 LVC*

(Cont. from page 3)

Empty containers may retain hazardous residue, both liquid and vapor.

**Conditions for safe storage, including any incompatibilities****Storage:**

**Information about storage in one common storage facility:** Use only in explosion protected area.

**Further information about storage conditions:** Keep receptacle tightly sealed.

**Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

**Additional information about design of technical systems:** No further data; see item 7.

**Control parameters****Components with limit values that require monitoring at the workplace:****95-47-6 Xylene (o)**

PEL (USA)	Long-term value: 435 mg/m <sup>3</sup> , 100 ppm
REL (USA)	Short-term value: 655 mg/m <sup>3</sup> , 150 ppm Long-term value: 435 mg/m <sup>3</sup> , 100 ppm
TLV (USA)	Short-term value: 651 mg/m <sup>3</sup> , 150 ppm Long-term value: 434 mg/m <sup>3</sup> , 100 ppm BEI

**8052-41-3 Stoddard solvent**

PEL (USA)	Long-term value: 2900 mg/m <sup>3</sup> , 500 ppm
REL (USA)	Long-term value: 350 mg/m <sup>3</sup> Ceiling limit value: 1800* mg/m <sup>3</sup> *15-min
TLV (USA)	Long-term value: 525 mg/m <sup>3</sup> , 100 ppm

**8052-42-4 Asphalt**

REL (USA)	Ceiling limit value: 5* mg/m <sup>3</sup> *15-min; See Pocket Guide App. A
TLV (USA)	Long-term value: 0.5* mg/m <sup>3</sup> *inh. fraction; as benzene-soluble aerosol; BEIp

**Ingredients with biological limit values:****95-47-6 Xylene (o)**

BEI (USA)	1.5 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids
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**8052-42-4 Asphalt**

BEI (USA)	- Medium: urine Time: end of shift at end of workweek Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative)
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**Additional information:** The lists that were valid during the creation were used as basis.

**Exposure controls****Personal protective equipment:**

**General protective and hygienic measures:** The usual precautionary measures for handling chemicals should be followed.

**Breathing equipment:**

Control exposure to ingredients with workplace control parameters if mentioned above. If no ingredients are listed, respiratory protection is generally not required.

If exposure limits are listed and may be exceeded, use approved respiratory protective equipment and filter type appropriate for the listed ingredients. (NIOSH, CEN, etc.).

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A chemical cartridge respirator with organic vapor cartridge is required if occupational exposure limits are exceeded. A dust/mist cartridge or prefilter may be needed in addition to control exposure to mist. Supplied air respirator (SCBA) is required at exposure levels above the capabilities of a chemical cartridge respirator.

**Protection of hands:** Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

**Material of gloves** Gloves should be worn to prevent skin contact and should be impermeable and resistant to the product.

**Eye protection:**

Safety glasses with side shield protection.

Safety glasses with side shields should be worn to prevent contact due to splashing. Under high vapor mist concentrations, tightly sealed goggles should be worn.



A face shield should also be worn if there is potential exposure to splash or spray.

**Body protection:**

Use personal protective equipment as required.

Take off contaminated clothing.

## 9 Physical and chemical properties

### Information on basic physical and chemical properties

**General Information****Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	According to product specification
<b>Odor:</b>	Characteristic
<b>Odor threshold:</b>	Not determined.

**pH-value (~):** Not determined.

**Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	161 °C (321.8 °F)
<b>Flash point:</b>	27 °C (80.6 °F)

**Flammability (solid, gaseous):** Not applicable.

**Ignition temperature:** 465 °C (869 °F)

**Decomposition temperature:** Not determined.

**Auto igniting:** Product is not self-igniting.

**Danger of explosion:** In use, may form flammable/explosive vapor-air mixture.

**Explosion limits:**

<b>Lower:</b>	1.7 Vol %
<b>Upper:</b>	7.6 Vol %
<b>VOC Content (max):</b>	Not determined.

<b>Vapor pressure at 20 °C (68 °F):</b>	7 hPa (5.3 mm Hg)
<b>Density: (~) at 20 °C (68 °F)</b>	1 g/cm <sup>3</sup> (8.3 lbs/gal)
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.

**Solubility in / Miscibility with**

**Water:** Not miscible or difficult to mix.

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Reviewed on 05/08/2018

Trade name: *Bituthene Adhesive Primer B2 LVC*

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Partition coefficient (n-octanol/water): Not determined.

**Viscosity:****Dynamic:**

Not determined.

**Kinematic:**

Not determined.

**Molecular weight**

Not applicable.

**Other information**

No further relevant information available.

**10 Stability and reactivity****Reactivity** Stable under normal conditions.**Chemical stability****Thermal decomposition:** No decomposition if used according to specifications.**Possibility of hazardous reactions** No dangerous reactions known.**Conditions to avoid** No further relevant information available.**Incompatible materials:** No further relevant information available.**Hazardous decomposition products:**

Carbon monoxide and carbon dioxide

Other potentially hazardous products may also be formed.

**Additional information:** See section 7 for information on handling, storage and conditions to be avoided.**11 Toxicological information****Information on toxicological effects****Acute toxicity:****Primary irritant effect:****on the skin:** Causes skin irritation.**on the eye:** No irritating effect expected**inhalation:** No irritating effect expected**Additional toxicological information:**

The product can cause inheritable damage.

Over exposure by inhalation or ingestion may be fatal. Chemicals contained in this product can affect the skin, heart, brain, liver, kidneys, lungs and spleen. Some harmful effects are also possible through skin absorption.

**Carcinogenic categories****IARC (International Agency for Research on Cancer) Human Carcinogenicity:**  
**Group 1- Positive, Group 2A- Probable, Group 2B- Possible, Group 3- Not Classifiable**

95-47-6	Xylene (o)	3
8052-42-4	Asphalt	2B
100-41-4	Ethylbenzene	2B

**NTP (National Toxicology Program)****K–Known to be carcinogenic, R–May reasonably be anticipated to be carcinogenic**

None of the ingredients is listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

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Trade name: *Bituthene Adhesive Primer B2 LVC*

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**12 Ecological information****Toxicity****Aquatic toxicity:** No further relevant information available.**Persistence and degradability** No further relevant information available.**Behavior in environmental systems:****Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:**

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects** No further relevant information available.**13 Disposal considerations****Disposal methods:**

Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing product for disposal. Dispose of waste in accordance with all applicable regulations.

**Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packagings:****Recommendation:** Dispose of contents/container in accordance with local/regional/national/international regulations.**14 Transport information****UN-Number**

DOT, IMDG, IATA UN3295

**UN proper shipping name**DOT Hydrocarbons, liquid, n.o.s.  
IMDG, IATA HYDROCARBONS, LIQUID, N.O.S.**Transport hazard class(es)**

DOT



Class 3 Flammable liquids

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Trade name: *Bituthene Adhesive Primer B2 LVC*

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<b>Label</b>	3
<b>IMDG, IATA</b>	
	
<b>Class</b>	3 Flammable liquids
<b>Label</b>	3

<b>Packing group</b>	III
<b>DOT, IMDG, IATA</b>	

<b>Environmental hazards:</b>	
<b>Marine pollutant:</b>	No

<b>Special precautions for user</b>	Warning: Flammable liquids
<b>Danger code (Kemler):</b>	30
<b>EMS Number:</b>	F-E,S-D
<b>Stowage Category</b>	A

**Transport/Additional information:**

<b>IMDG</b>	
<b>Limited quantities (LQ)</b>	5L
<b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

<b>UN "Model Regulation":</b>	UN 3295 HYDROCARBONS, LIQUID, N.O.S., 3, III
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**15 Regulatory information****SARA (Superfund Amendments and Reauthorization Act)****Section 302/304 (extremely hazardous substances):**

None of the ingredients is listed.

**Section 313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):**

95-47-6	Xylene (o)	14.5%
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**SARA Section 312/Tier I & II Hazard Categories:**

Physical Hazard - Flammable (gases, aerosols, liquids, or solids)  
 Health Hazard - Carcinogenicity  
 Health Hazard - Skin Corrosion or Irritation  
 Health Hazard - Specific target organ toxicity (single or repeated exposure)  
 Health Hazard - Germ cell mutagenicity

**North America Chemical Inventory Status****TSCA (Toxic Substances Control Act - United States):**

All ingredients are listed or exempt from listing unless otherwise noted below.

**CEPA (Canadian DSL):**

All ingredients are listed or exempt from listing unless otherwise noted below.

**Right to Know Ingredient Disclosure:**

616-38-6 | dimethyl carbonate

**California Proposition 65: (Substances <0.1% unless noted in Section 3)****Chemicals known to cause cancer:**

Ethylbenzene

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

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Trade name: *Bituthene Adhesive Primer B2 LVC*

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**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

**Carcinogenicity Categories****TLV-ACGIH (THE American Conference of Governmental Industrial Hygienists)  
Human Carcinogen - A1 Confirmed, A2 Suspected, A3 Unknown Relevance, A4 Not Classifiable**

Xylene (o)

A4

Asphalt

A4

**NIOSH-Cancer (National Institute for Occupational Safety and Health)**

8052-42-4 | Asphalt

**Volatile Organic Compounds (VOC) reported per the Emission Standards. 192 grams/liter****16 Other information**

The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection.

**Department issuing SDS:**

GCP Applied Technologies  
62 Whittemore Avenue  
Cambridge, MA 02140 USA  
USA: +1-617-876-1400 (24 hours)  
+1-800-354-5414

**Date of preparation / last revision** 05/08/2018 / -**The first date of preparation** 03/04/2015**Number of revision times and the latest revision date** 1.0 / 05/08/2018

USGHS



# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>PERM-A-BARRIER HRA CAP B &amp; CAP W</b>
<b>Other means of identification</b>	
<b>Product Identifier</b>	ARTICLE
<b>Synonyms</b>	Flintlastic GMS (Black) * Flintlastic GMS (White)
<b>Recommended use</b>	Asphalt membrane used for waterproofing
<b>Recommended restrictions</b>	No other uses are advised.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer</b>	
<b>Company name</b>	GCP Applied Technologies
<b>Address</b>	2325 Lakeview Pkwy Alpharetta, GA 30009 United States
<b>Telephone</b>	+1 866-333-3726
<b>E-mail</b>	Not available.
<b>Emergency phone number</b>	3E Global Incident Hotline 1 760 476 3962 1 866 519 4752 (Toll Free) Access Code: 336250

## 2. Hazard(s) identification

This product is considered as an Article as outlined in OSHA's Hazardous Communication Standard (29 CFR 1910.1200), and thus is not required to have a Safety Data Sheet (SDS). This SDS is prepared and offered for information only. OSHA's HCS definition of "Article" means "a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees." 29 CFR 1910.1200(c).

## 3. Composition/information on ingredients

### Mixtures

<b>Chemical name</b>	<b>Common name and synonyms</b>	<b>CAS number</b>	<b>%</b>
Waterproofing flashing cap sheet		NA	100

This product is an article.

## 4. First-aid measures

This product is an article and is not expected to release hazardous chemicals under normal conditions of use.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Not available.
<b>Specific hazards arising from the chemical</b>	Not applicable.
<b>Special protective equipment and precautions for firefighters</b>	Not available.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Not available.
<b>Methods and materials for containment and cleaning up</b>	Not available.
<b>Environmental precautions</b>	Not available.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Not available.
<b>Conditions for safe storage, including any incompatibilities</b>	Not available.

## 8. Exposure controls/personal protection

This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions. No engineering controls or personal protective equipment (PPE) are necessary.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Solid.
<b>Form</b>	Sheets.
<b>Color</b>	Black. and White.
<b>Odor</b>	Odorless.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Not available.
<b>Possibility of hazardous reactions</b>	Not available.
<b>Conditions to avoid</b>	Not available.
<b>Incompatible materials</b>	Not available.
<b>Hazardous decomposition products</b>	Not available.

## 11. Toxicological information

This product, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards

## 12. Ecological information

This article is expected to present a low environmental risk either because use and disposal are unlikely to result in a significant release of components to the environment or because those components that may be released are expected to have insignificant environmental impact.

## 13. Disposal considerations

Dispose of contents/container in accordance with the local/regional/national/international regulations.

## 14. Transport information

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## 15. Regulatory information

This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory requirements.

## 16. Other information, including date of preparation or last revision

**Issue date** 04-05-2024

**Version #** 01

**Disclaimer** GCP Applied Technologies cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.



# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>PERM-A-BARRIER Neoprene</b>
<b>Other means of identification</b>	
<b>Synonyms</b>	Uncured Neoprene Flashing
<b>Recommended use</b>	Waterproofing flashing
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer</b>	
<b>Company name</b>	GCP Applied Technologies
<b>Address</b>	2325 Lakeview Pkwy Alpharetta, GA 30009 United States
<b>Telephone</b>	+1 866-333-3726
<b>E-mail</b>	Not available.
<b>Emergency phone number</b>	3E Global Incident Hotline 1 760 476 3962 1 866 519 4752 (Toll Free) Access Code: 336250

## 2. Hazard(s) identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Sensitization, skin	Category 1
	Carcinogenicity	Category 1B
<b>Environmental hazards</b>	Not classified.	
<b>OSHA defined hazards</b>	Not classified.	

### Label elements



<b>Signal word</b>	Danger
<b>Hazard statement</b>	May cause an allergic skin reaction. May cause cancer.
<b>Precautionary statement</b>	
<b>Prevention</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.
<b>Response</b>	If on skin: Wash with plenty of water. If exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
<b>Storage</b>	Store locked up.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	Encapsulation in the rubber matrix generally precludes hazardous exposure. However, some vapors may be released during hot processing.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC		64742-52-5	10 - 30
1,3-Butadiene, homopolymer		9003-17-2	1 - 5
Aluminosilicate solid ceramic spheres		68131-74-8	1 - 5
Magnesium oxide		1309-48-4	1 - 5
Zinc Oxide		1314-13-2	1 - 5
Rosin		8050-09-7	0.1 - 1
Tetramethylthiuram Monosulphide		97-74-5	0.1 - 1

**Composition comments** The exact concentrations of the above listed chemicals are being withheld as a trade secret. All concentrations are in percent by weight.

#### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	May cause an allergic skin reaction. Dermatitis. Rash.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	If exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Stop the flow of material, if this is without risk. Following product recovery, flush area with water. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.



## 7. Handling and storage

**Precautions for safe handling** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities** Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

#### US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC (CAS 64742-52-5)	PEL	5 mg/m <sup>3</sup>	Mist.
		2000 mg/m <sup>3</sup>	
		500 ppm	
Magnesium oxide (CAS 1309-48-4)	PEL	15 mg/m <sup>3</sup>	Total particulate.
Zinc Oxide (CAS 1314-13-2)	PEL	5 mg/m <sup>3</sup>	Fume.
		5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.

#### US. OSHA Table Z-3 Permissible Exposure Limits (PEL) for Mineral Dusts (29 CFR 1910.1000)

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
Zinc Oxide (CAS 1314-13-2)	TWA	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

#### US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC (CAS 64742-52-5)	TWA	5 mg/m <sup>3</sup>	Inhalable fraction.
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m <sup>3</sup>	Inhalable fraction.
Rosin (CAS 8050-09-7)	TWA	0.001 mg/m <sup>3</sup>	Inhalable fraction.
Zinc Oxide (CAS 1314-13-2)	STEL	10 mg/m <sup>3</sup>	Respirable fraction.
	TWA	2 mg/m <sup>3</sup>	Respirable fraction.

**NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended**

Components	Type	Value
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC (CAS 64742-52-5)	IDLH	2500 mg/m3
Magnesium oxide (CAS 1309-48-4)	IDLH	750 mg/m3
Zinc Oxide (CAS 1314-13-2)	IDLH	500 mg/m3

**US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)**

Components	Type	Value	Form
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC (CAS 64742-52-5)	Ceiling	1800 mg/m3	
	STEL	10 mg/m3	Mist.
Rosin (CAS 8050-09-7)	TWA	0.1 mg/m3	
Zinc Oxide (CAS 1314-13-2)	Ceiling	15 mg/m3	Dust.
	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Fume.
		5 mg/m3	Dust.

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Wear safety glasses with side shields (or goggles).

**Skin protection****Hand protection**

Protective gloves.

**Other**

Normal work clothing (long sleeved shirts and long pants) is recommended.

**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

**9. Physical and chemical properties****Appearance****Physical state**

Solid.

**Form**

Solid.

**Color**

Black.

**Odor**

Not available.

**Odor threshold**

Not available.

**pH**

Not available.

**Melting point/freezing point**

Not available.

**Initial boiling point and boiling range**

Not available.

**Flash point**

Not available.

**Evaporation rate**

Not available.

**Flammability (solid, gas)**

Not available.

**Upper/lower flammability or explosive limits****Explosive limit - lower (%)** Not available.**Explosive limit - upper (%)** Not available.**Vapor pressure** Not available.**Vapor density** Not available.**Relative density** Not available.**Solubility(ies)****Solubility (water)** Not available.**Partition coefficient (n-octanol/water)** Not available.**Auto-ignition temperature** Not available.**Decomposition temperature** Not available.**Viscosity** Not available.**Other information****Explosive properties** Not explosive.**Oxidizing properties** Not oxidizing.**10. Stability and reactivity****Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.**Chemical stability** Material is stable under normal conditions.**Possibility of hazardous reactions** No dangerous reaction known under conditions of normal use.**Conditions to avoid** Contact with incompatible materials.**Incompatible materials** Strong oxidizing agents.**Hazardous decomposition products** No dangerous reaction known under conditions of normal use. Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.**11. Toxicological information****Information on likely routes of exposure****Inhalation** Prolonged inhalation may be harmful.**Skin contact** May cause an allergic skin reaction.**Eye contact** Direct contact with eyes may cause temporary irritation.**Ingestion** Expected to be a low ingestion hazard.**Symptoms related to the physical, chemical and toxicological characteristics** May cause an allergic skin reaction. Dermatitis. Rash.**Information on toxicological effects****Acute toxicity** Not known.

Components	Species	Test Results
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Magnesium oxide (CAS 1309-48-4)

**Acute****Oral**

LD50 Rat 3870 mg/kg

Zinc Oxide (CAS 1314-13-2)

**Acute****Inhalation**

LC50 Mouse &gt; 5.7 mg/l, 4 Hours

**Oral**

LD50 Rat &gt; 5 g/kg

**Skin corrosion/irritation** Due to partial or complete lack of data the classification is not possible.**Serious eye damage/eye irritation** Due to partial or complete lack of data the classification is not possible.

## Respiratory or skin sensitization

### ACGIH sensitization

Resin acids, as total Resin Acids, inhalable fraction      Dermal sensitization

(CAS 8050-09-7)

Respiratory sensitization

**Respiratory sensitization**      Not a respiratory sensitizer.

**Skin sensitization**      May cause an allergic skin reaction.

**Germ cell mutagenicity**      Due to partial or complete lack of data the classification is not possible.

**Carcinogenicity**      May cause cancer.

### IARC Monographs. Overall Evaluation of Carcinogenicity

DISTILLATES (PETROLEUM), HYDROTREATED      3 Not classifiable as to carcinogenicity to humans.  
HEAVY NAPHTHENIC (CAS 64742-52-5)

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

### US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

**Reproductive toxicity**      Due to partial or complete lack of data the classification is not possible.

**Specific target organ toxicity - single exposure**      Due to partial or complete lack of data the classification is not possible.

**Specific target organ toxicity - repeated exposure**      Due to partial or complete lack of data the classification is not possible.

**Aspiration hazard**      Not an aspiration hazard.

**Chronic effects**      Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity**      The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Tetramethylthiuram Monosulphide (CAS 97-74-5)		
<b>Aquatic</b>		
<i>Acute</i>		
Fish	LC50	Guppy (Poecilia reticulata) 4.2 - 6.8 mg/l, 96 hours
Zinc Oxide (CAS 1314-13-2)		
<b>Aquatic</b>		
<i>Acute</i>		
Fish	LC50	Fathead minnow (Pimephales promelas) 2246 mg/l, 96 hours

**Persistence and degradability**      No data is available on the degradability of any ingredients in the mixture.

**Bioaccumulative potential**      No data available.

**Mobility in soil**      No data available.

**Other adverse effects**      No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Disposal instructions**      Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations**      Dispose in accordance with all applicable regulations.

**Hazardous waste code**      The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products**      Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**      Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**Toxic Substances Control Act (TSCA)** All components of the mixture on the TSCA 8(b) inventory are designated "active".

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Zinc Oxide (CAS 1314-13-2) Listed.

### SARA 304 Emergency release notification

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**Classified hazard categories** Respiratory or skin sensitization  
Carcinogenicity

#### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Zinc Oxide	1314-13-2	1 - 5

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

### US state regulations

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC (CAS 64742-52-5)

#### California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### International Inventories

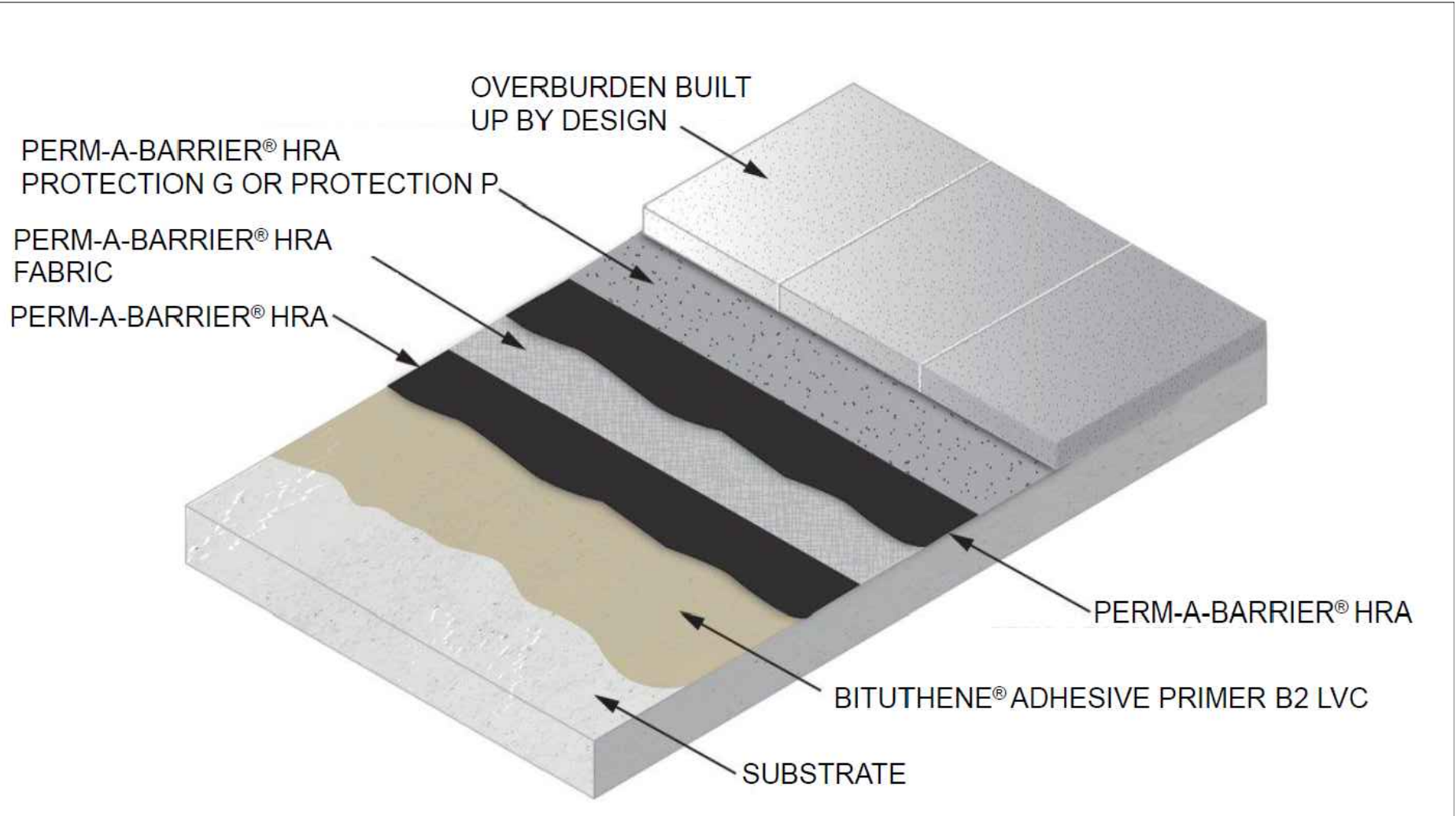
Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

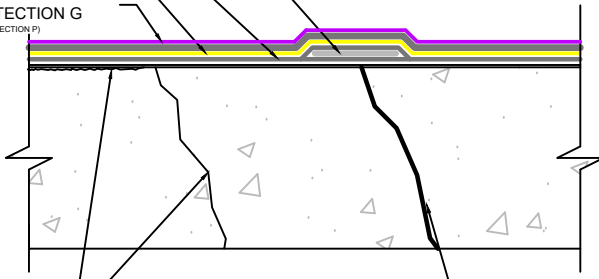
<b>Issue date</b>	05-15-2024
<b>Version #</b>	01
<b>Disclaimer</b>	GCP Applied Technologies cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.



OVERALL ASSEMBLY  
 PERM-A-BARRIER® HRA WATERPROOFING SYSTEM

DRAWING: HRA-001
SCALE: NOT TO SCALE
EFFECTIVE DATE: 07-01-2024
SUPERCEDES: N/A

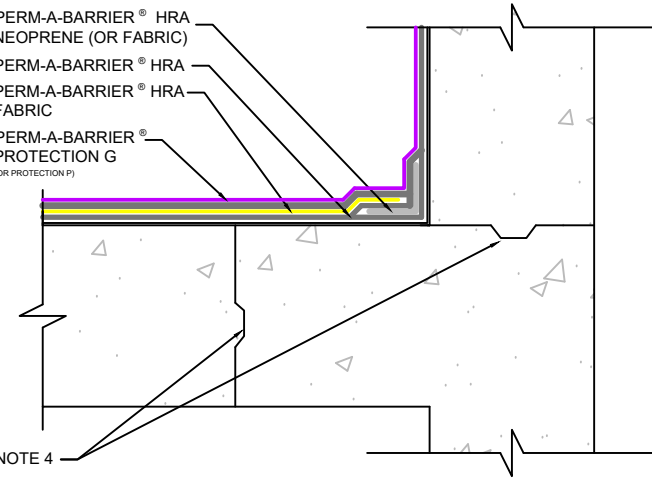
PERM-A-BARRIER® HRA  
 NEOPRENE (OR FABRIC)  
 PERM-A-BARRIER®  
 HRA  
 PERM-A-BARRIER®  
 HRA FABRIC  
 PERM-A-BARRIER®  
 PROTECTION G  
 (OR PROTECTION P)



SEE NOTES REGARDING  
SHRINKAGE CRACKS <math>< \frac{1}{16}</math>"

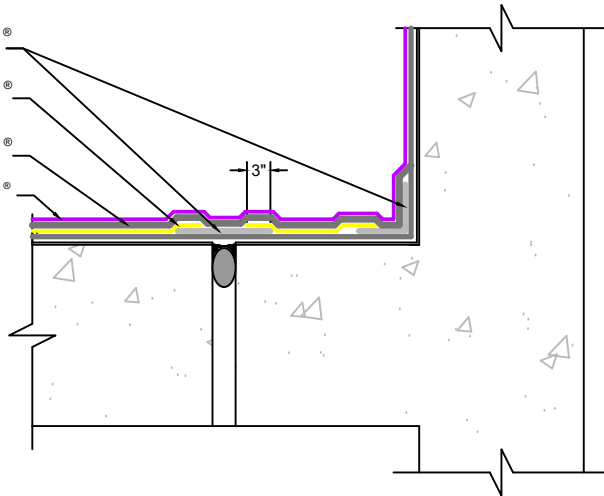
STRUCTURAL CRACKS  
>math>\frac{1}{16}</math>" & <math>< \frac{1}{4}</math>" IN WIDTH

PERM-A-BARRIER® HRA  
 NEOPRENE (OR FABRIC)  
 PERM-A-BARRIER® HRA  
 PERM-A-BARRIER® HRA  
 FABRIC  
 PERM-A-BARRIER®  
 PROTECTION G  
 (OR PROTECTION P)

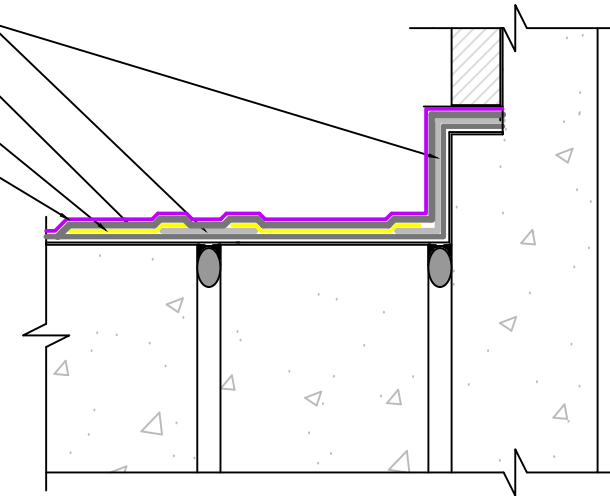


SEE NOTE 4

PERM-A-BARRIER®  
 HRA NEOPRENE  
 PERM-A-BARRIER®  
 HRA FABRIC  
 PERM-A-BARRIER®  
 HRA  
 PERM-A-BARRIER®  
 PROTECTION G  
 (OR PROTECTION P)



PERM-A-BARRIER®  
 HRA NEOPRENE  
 PERM-A-BARRIER®  
 HRA  
 PERM-A-BARRIER®  
 HRA FABRIC  
 PERM-A-BARRIER®  
 PROTECTION G  
 (OR PROTECTION P)



NOTES:

1. ADDTL REINFORCEMENT NOT REQUIRED FOR ROUGH CONCRETE OR CRACKS UP TO  $\frac{1}{16}$ "
2. EXPANSION JOINTS UP TO 1" IN WIDTH AND MAX 25% MOVEMENT ACCOMMODATION FACTOR (REF. HRA-004)
3. FOR EXPANSION JOINTS GREATER THAN 2", EXPANSION JOINTS ANTICIPATING GREATER THAN 25%
4. CONSTRUCTION JOINTS & AT ALL CHANGES IN PLANE (HRA-003)
5. MOVEMENT ACCOMMODATION FACTOR AND FOR SEISMIC EXPANSION JOINTS, THE USE OF PRE-FABRICATED, PROPRIETARY JOINT SYSTEMS SHOULD BE CONSIDERED



## CRACK AND JOINT TREATMENT

### PERM-A-BARRIER® HRA WATERPROOFING SYSTEM

DRAWING: HRA-002

SCALE: NOT TO SCALE

EFFECTIVE DATE: 07-01-2024

SUPERCEDES: N/A

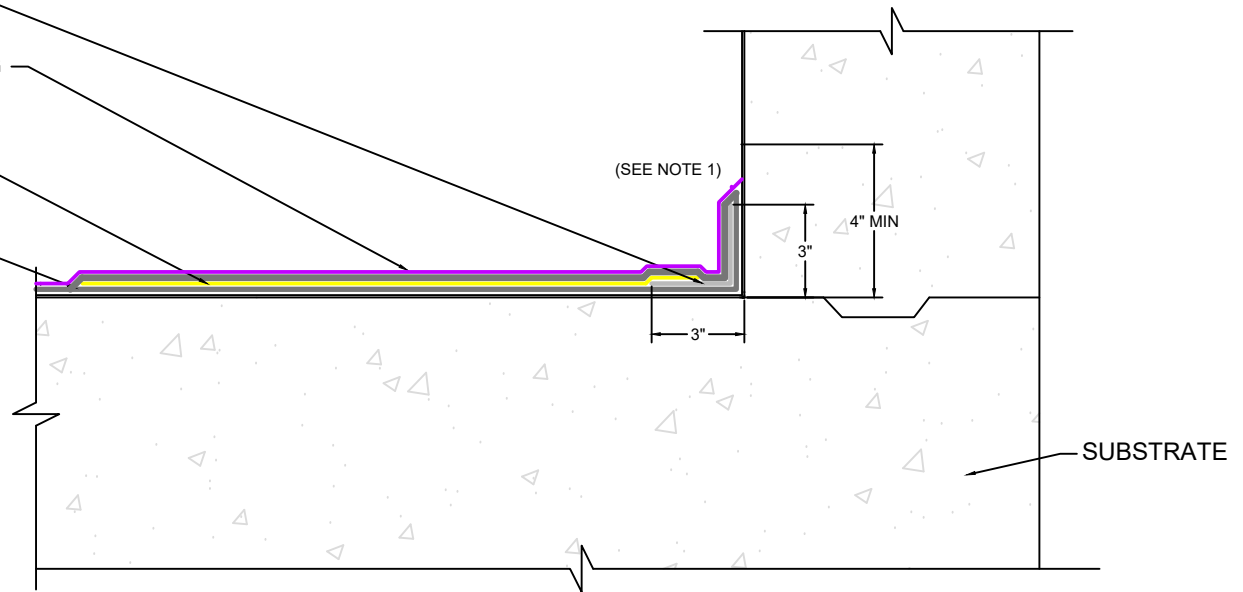


PERM-A-BARRIER® HRA NEOPRENE  
(OR FABRIC)

PERM-A-BARRIER® HRA PROTECTION G  
(OR PROTECTION P)

PERM-A-BARRIER® HRA FABRIC

PERM-A-BARRIER® HRA



PERM-A-BARRIER® HRA PROTECTION G  
(OR PROTECTION P)

PERM-A-BARRIER® HRA FABRIC

PERM-A-BARRIER® HRA



NOTES:

1. IN COVERED/BURIED CONDITIONS, HRA IS EXTENDED AS CONTINUOUS FLASHING AS HIGH AS POSSIBLE. FLASHING MUST BE TERMINATED AT OVERBURDEN LEVEL AND NO LESS THAN 4" ABOVE THE SUBSTRATE
2. REGLETS CAN BE CAST/FORMED OR CUT INTO THE CONCRETE. REGLETS SHOULD BE MIN. 1/2" DEEP AND PROVIDE AN EASY TRANSITION FOR THE MEMBRANE FLASHING
3. ADDITIONAL REINFORCEMENT NOT REQUIRED AT TYPICAL CONSTRUCTION/CONTROL JOINTS WITH THE FABRIC REINFORCED ASSEMBLY



## CONCRETE CONSTRUCTION JOINTS

### PERM-A-BARRIER® HRA WATERPROOFING SYSTEM

DRAWING: HRA-003

SCALE: NOT TO SCALE

EFFECTIVE DATE: 07-01-2024

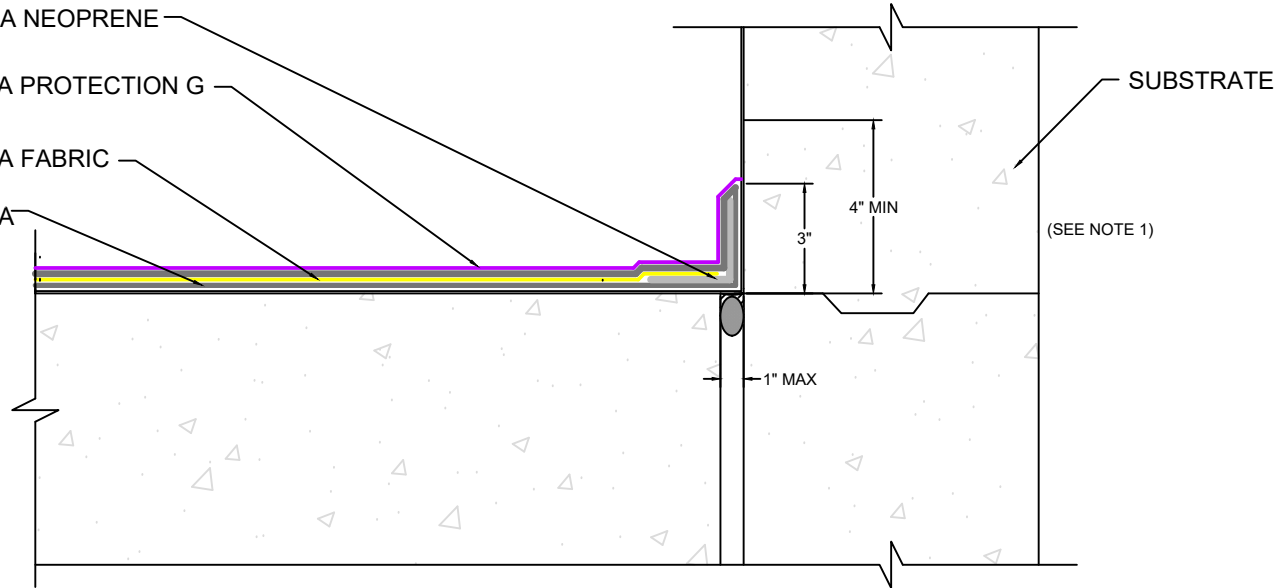
SUPERCEDES: N/A

PERM-A-BARRIER® HRA NEOPRENE  
(OR FABRIC)

PERM-A-BARRIER® HRA PROTECTION G  
(OR PROTECTION P)

PERM-A-BARRIER® HRA FABRIC

PERM-A-BARRIER® HRA

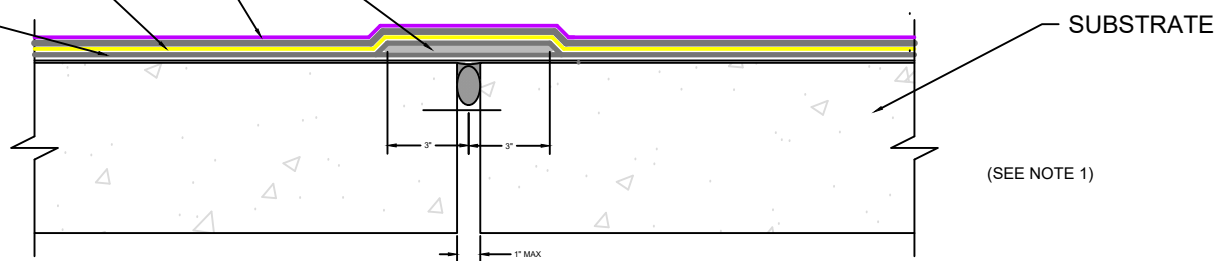


PERM-A-BARRIER® HRA NEOPRENE  
(OR FABRIC)

PERM-A-BARRIER® HRA PROTECTION G  
(OR PROTECTION P)

PERM-A-BARRIER® HRA FABRIC

PERM-A-BARRIER® HRA



NOTES:

1. DETAIL DESIGNED FOR JOINTS WITH MAX. MOVEMENT ACCOMMODATION FACTOR OF 25%.
2. BACKER ROD AND SEALANT ARE REQUIRED IN JOINT PRIOR TO HRA INSTALLATION.
3. IN COVERED/BURIED CONDITIONS, HRA IS EXTENDED AS CONTINUOUS FLASHING AS HIGH AS THE OVERBURDEN LEVEL. FLASHING MUST BE TERMINATED NO LESS THAN 4" ABOVE SUBSTRATE. ADDITIONALLY, ADEQUATE PROTECTION MUST BE PROVIDED FOR FLASHING FROM SUBSEQUENT TOPPING/BACKFILL. WHENEVER POSSIBLE THE EXPANSION JOINT SHOULD BE EXTENDED UP THROUGH ALL TOPPING LAYERS.
4. REGLETS CAN BE CAST/FORMED OR CUT INTO THE CONCRETE. REGLETS SHOULD BE MIN. 1/4" DEEP AND PROVIDE AN EASY TRANSITION FOR THE MEMBRANE FLASHING.



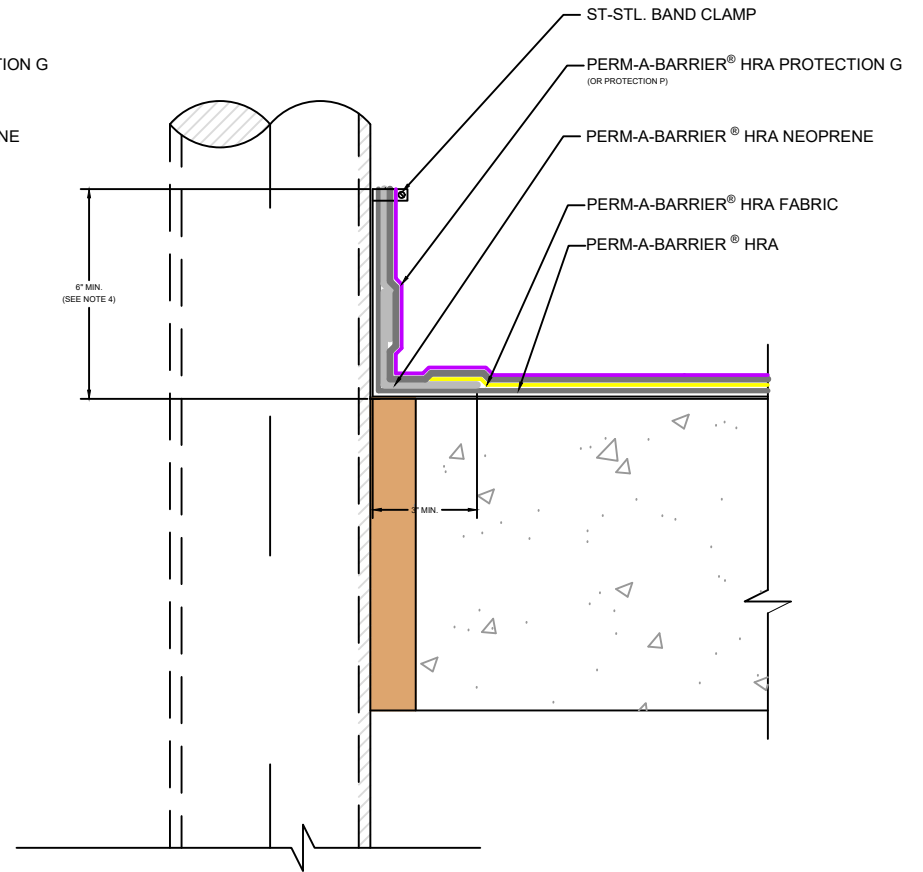
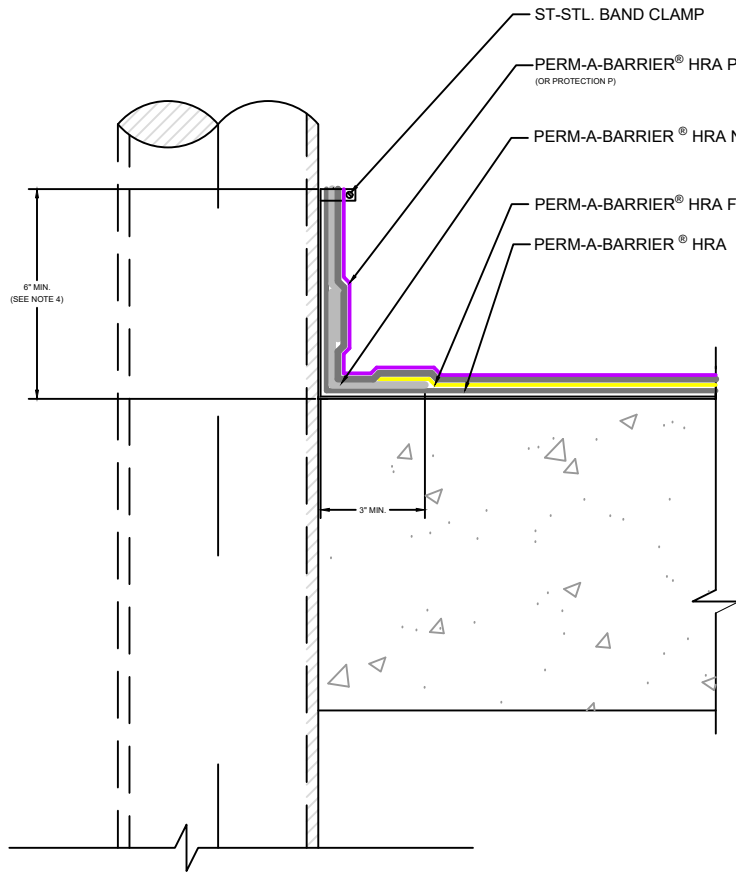
## EXPANSION JOINTS UP TO 1" AS-BUILT WIDTH PERM-A-BARRIER® HRA MEMBRANE SYSTEM

DRAWING: HRA-004

SCALE: NOT TO SCALE

EFFECTIVE DATE: 07-01-2024

SUPERCEDES: N/A



NOTES:

1. PENETRATION MUST BE PROPERLY SECURED TO STRUCTURE TO PREVENT VERTICAL OR LATERAL MOVEMENT. EXPOSED DECK CLAMPS ARE NOT APPROPRIATE.
2. SOME PIPE MATERIALS (PVC, COPPER, BRASS) MAY REQUIRE ROUGHENING/SANDING, IN ADDITION TO WIPING W/SURFACE CONDITIONER FOR PROPER ADHESION OF HRA. METAL PIPES MUST BE FREE OF ALL OIL AND RUST.
3. THE SAME DETAILING ABOVE WOULD BE EMPLOYED FOR PENETRATIONS THROUGH VERTICAL/FOUNDATION WALL APPLICATIONS.
4. IN COVERED/BURIED CONDITIONS, THE FLASHING DETAIL SHOULD BE EXTENDED AS HIGH AS POSSIBLE. FLASHING MUST BE TERMINATED AT OVERBURDEN LEVEL AND NO LESS THAN 6" ABOVE SUBSTRATE



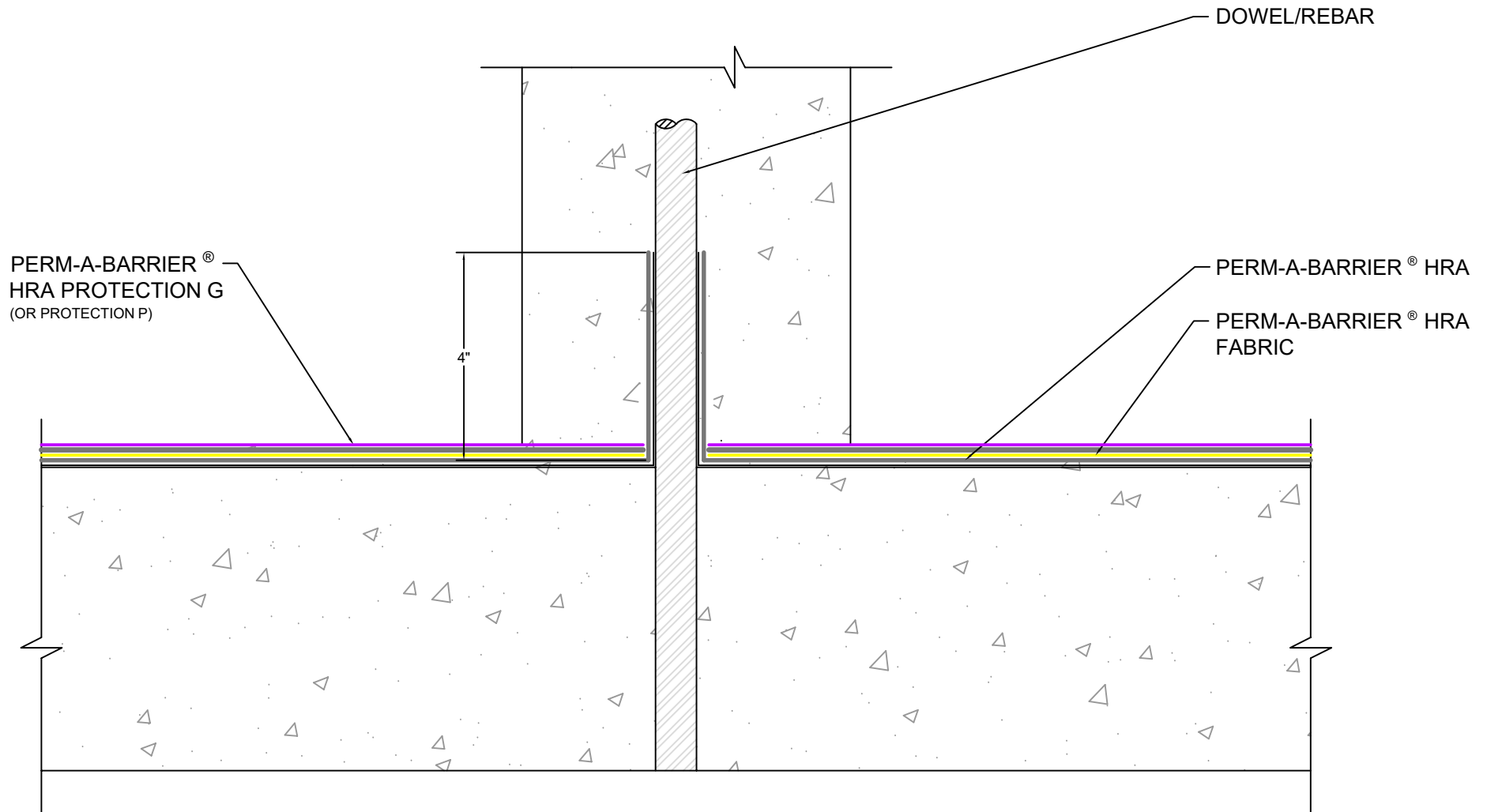
**PIPE PENETRATION**  
**PERM-A-BARRIER® HRA WATERPROOFING SYSTEM**

DRAWING: HRA-005

SCALE: NOT TO SCALE

EFFECTIVE DATE: 07-01-2024

SUPERCEDES: N/A



**NOTES:**

1. DOWEL/REBAR MUST BE PROPERLY SECURED TO STRUCTURE TO PREVENT VERTICAL OR LATERAL MOVEMENT.
2. PENETRATIONS MAY REQUIRE WIPING W/SURFACE CONDITIONER FOR PROPER ADHESION OF HRA. DOWEL/REBAR MUST BE FREE FROM ANY OIL, RUST OR OTHER CONTAMINATIONS.
3. DRAINAGE FROM ONE SIDE OF THE WALL TO THE OTHER MUST BE ACCOMMODATED. IF DECK DRAINS ARE NOT PLACED WITHIN THE CONFINED SPACE, SIMPLE SCUPPERS MAY BE FORMED INTO THE BASE OF THE WALL WITH PVC PIPE SECTION, CUT IN HALF AND LAID UPSIDE DOWN IN THE WALL FORMS.



**DOWEL/REBAR**  
**PERM-A-BARRIER® HRA WATERPROOFING SYSTEM**

DRAWING: HRA-006

SCALE: NOT TO SCALE

EFFECTIVE DATE: 07-01-2024

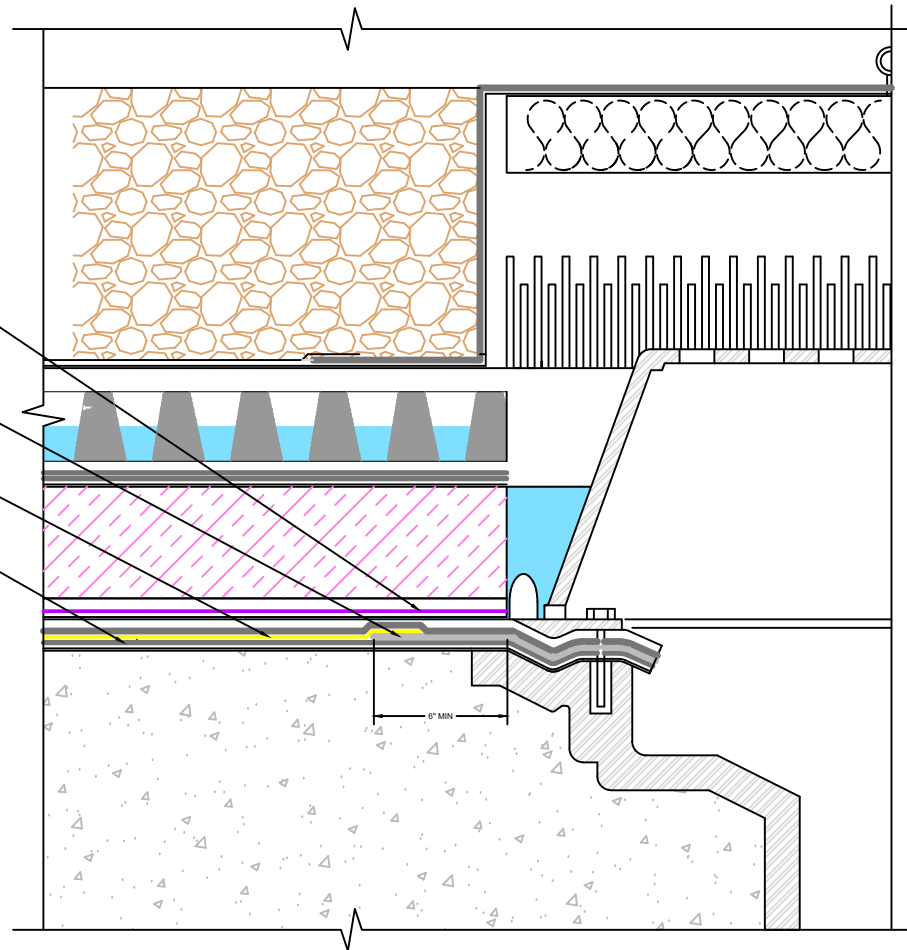
SUPERCEDES: N/A

PERM-A-BARRIER® HRA  
PROTECTION G  
(OR PROTECTION P)

PERM-A-BARRIER® HRA  
NEOPRENE

PERM-A-BARRIER® HRA  
FABRIC

PERM-A-BARRIER® HRA



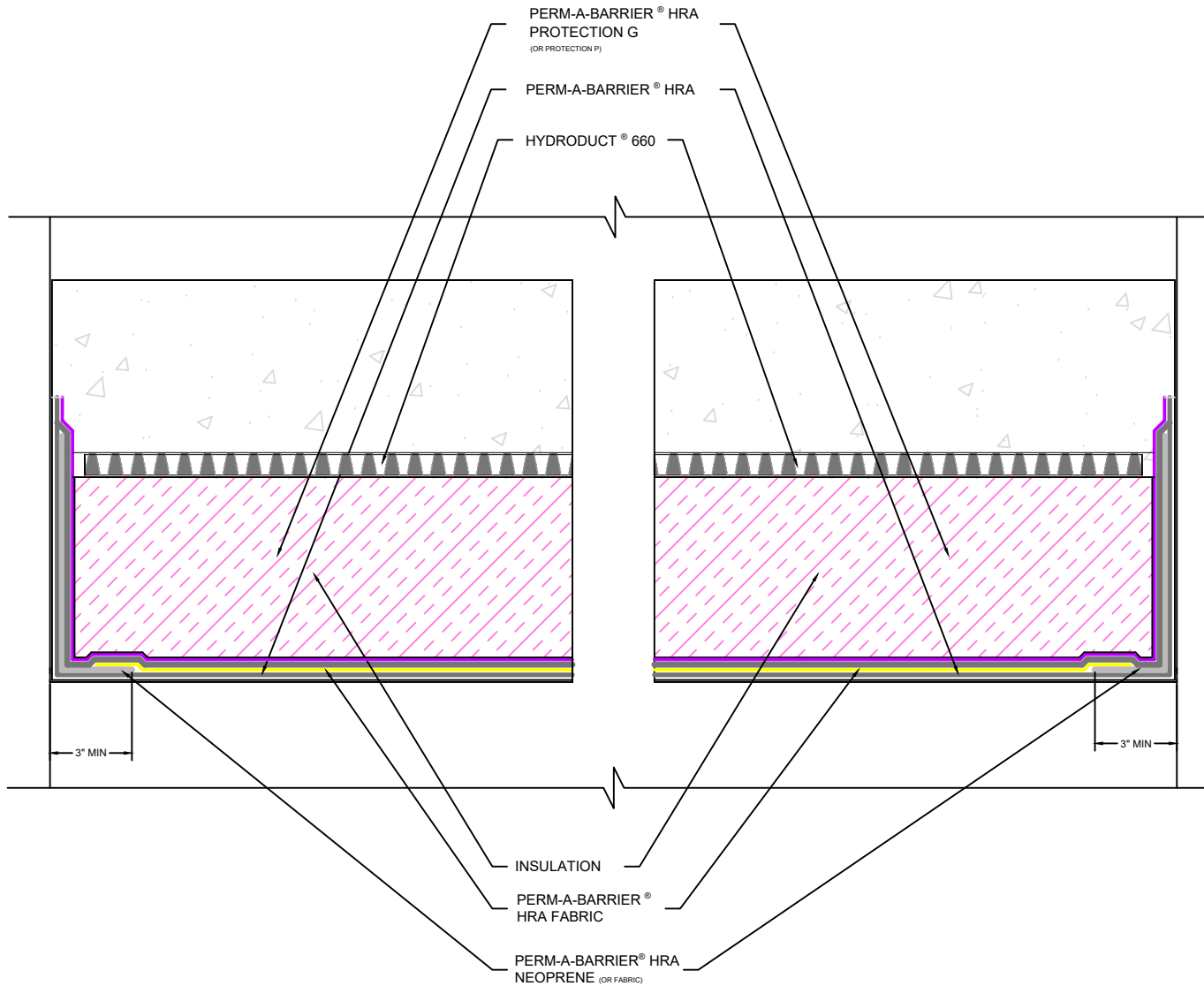
**DRAIN DETAIL**  
**PERM-A-BARRIER® HRA WATERPROOFING SYSTEM**

DRAWING: HRA-007

SCALE: NOT TO SCALE

EFFECTIVE DATE: 07-01-2024

SUPERCEDES: N/A



**CURB DETAIL**  
**PERM-A-BARRIER® HRA MEMBRANE SYSTEM**

DRAWING: HRA-008  
 SCALE: NOT TO SCALE  
 EFFECTIVE DATE: 07-01-2024  
 SUPERCEDES: N/A

PERM-A-BARRIER® HRA  
PROTECTION G  
(OR PROTECTION P)

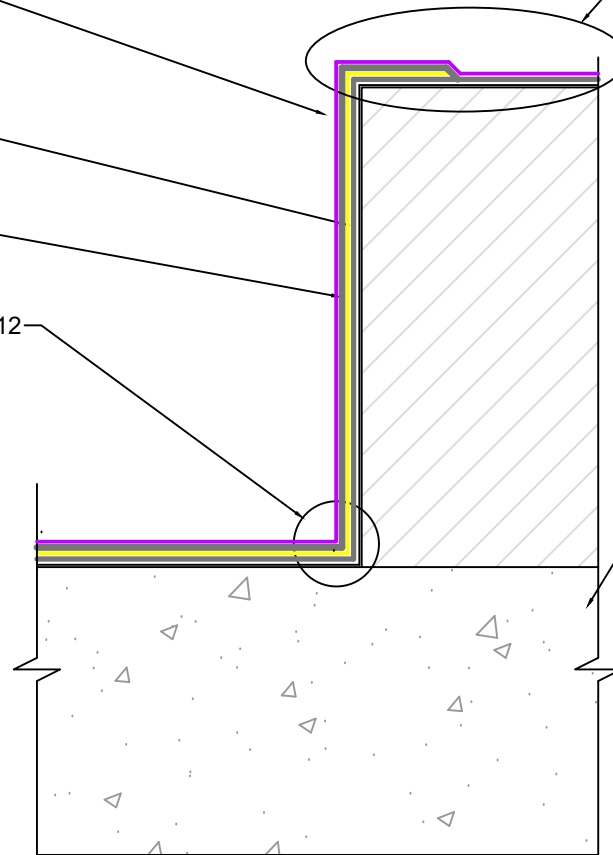
PERM-A-BARRIER® HRA  
FABRIC (OR NEOPRENE)

PERM-A-BARRIER® HRA

REFER TO DETAIL HRA-012  
FOR CORNER DETAILS

IF PERMANENTLY EXPOSED, USE  
PERM-A-BARRIER® HRA CAP SHEET  
APPROVED DETAILS

SUBSTRATE



PLANTER  
PERM-A-BARRIER® HRA MEMBRANE SYSTEM

DRAWING: HRA-009

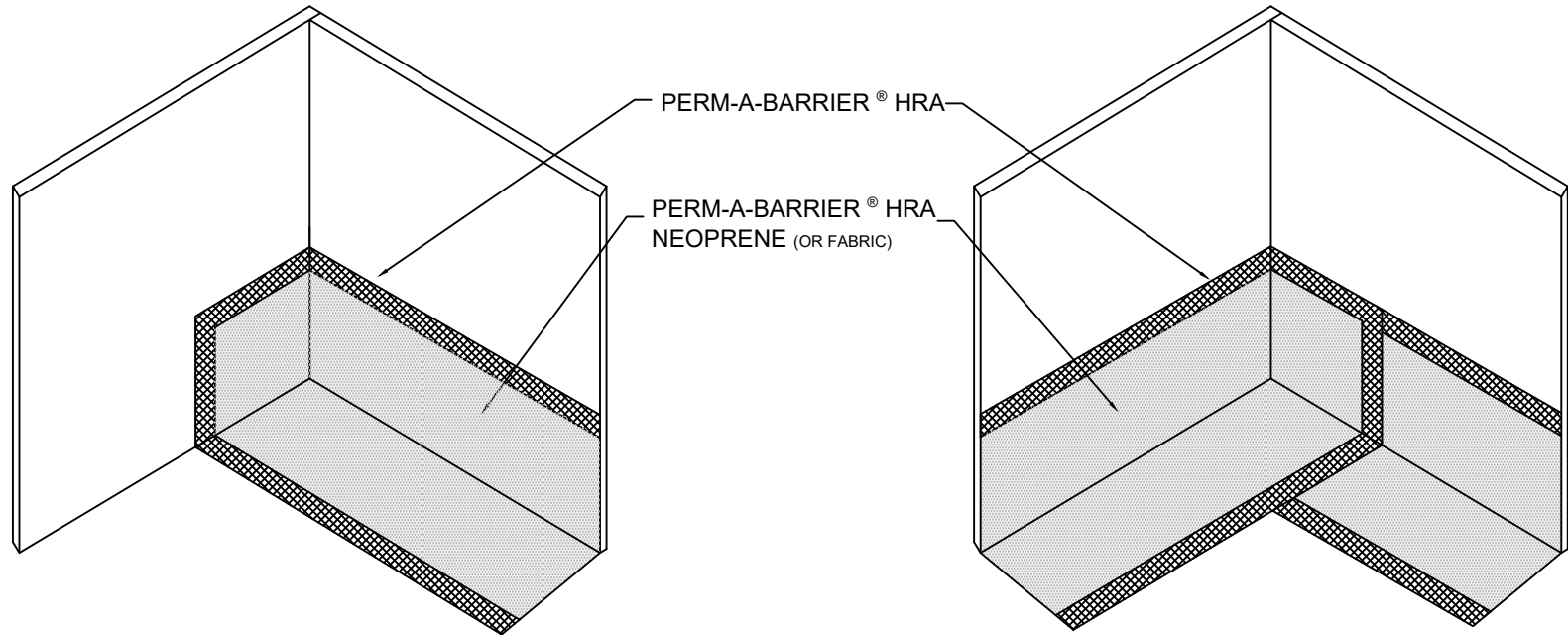
SCALE: NOT TO SCALE

EFFECTIVE DATE: 07-01-2024

SUPERCEDES: N/A

STEP 1

STEP 2



**INSIDE CORNER**  
**PERM-A-BARRIER® HRA WATERPROOFING SYSTEM**

DRAWING: HRA-010

SCALE: NOT TO SCALE

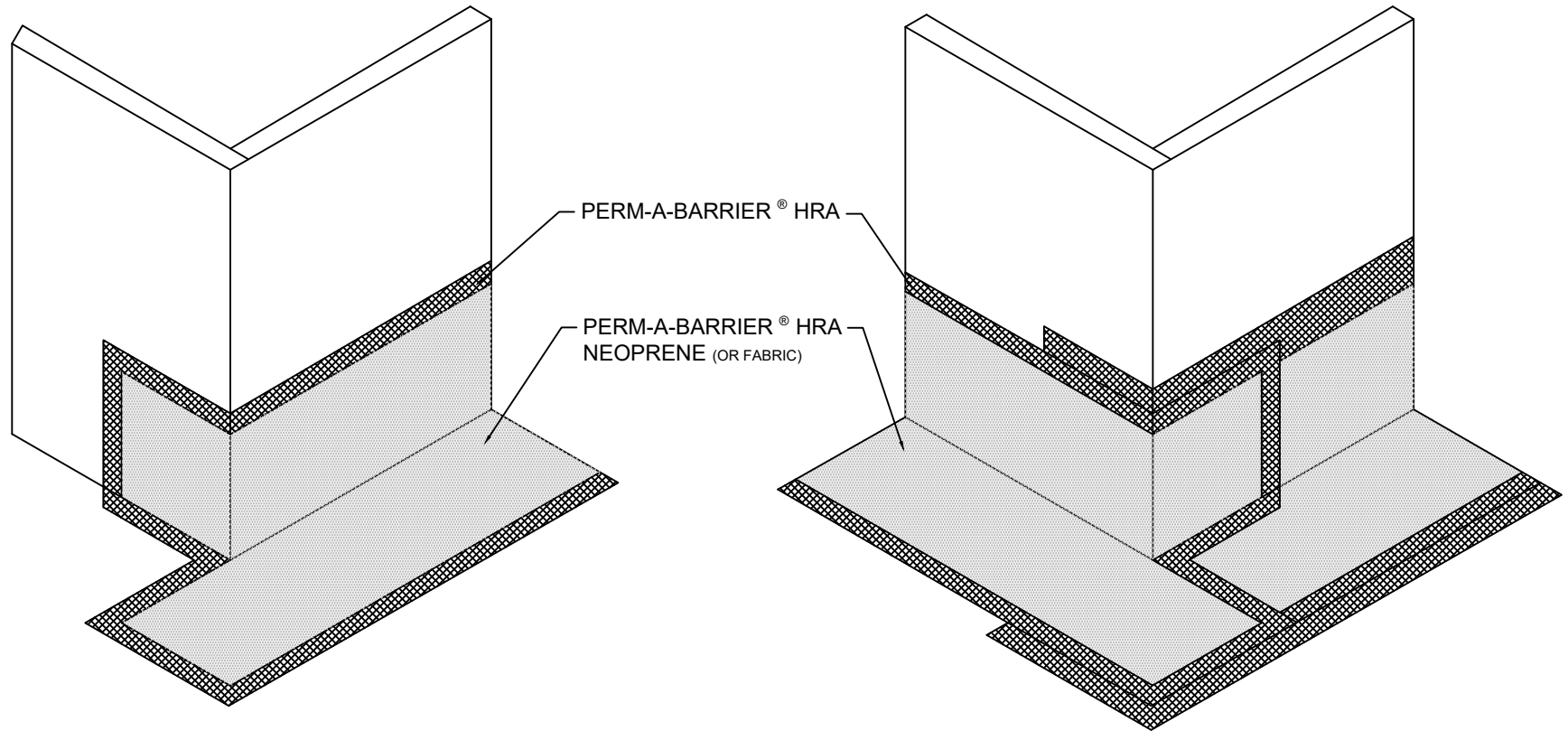
EFFECTIVE DATE: 07-01-2024

SUPERCEDES: N/A



STEP 1

STEP 2



OUTSIDE CORNER  
PERM-A-BARRIER® HRA WATERPROOFING SYSTEM

DRAWING: HRA-011

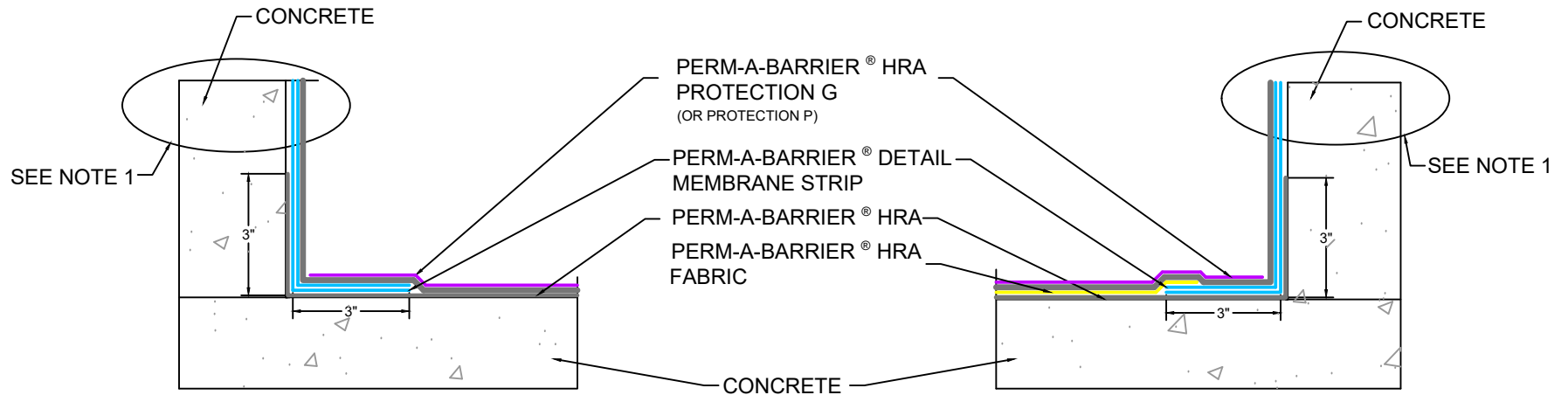
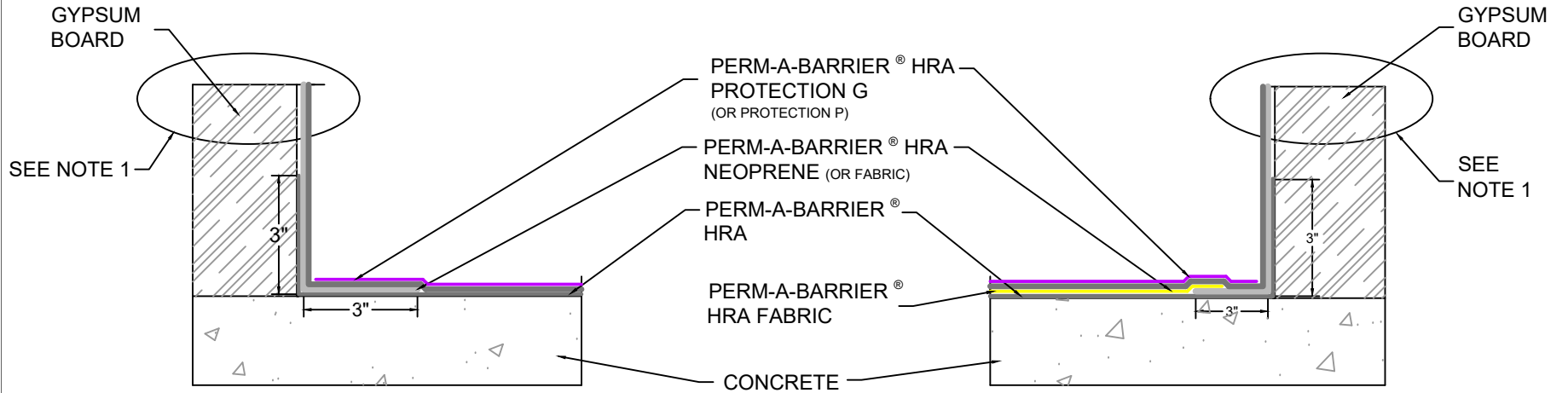
SCALE: NOT TO SCALE

EFFECTIVE DATE: 07-01-2024

SUPERCEDES: N/A

STANDARD ASSEMBLY

FABRIC REINFORCED ASSEMBLY



NOTES  
 1. CORNER WILL TRANSITION BY DESIGN OF THE WALL, FOLLOW GCP APPROVED TIE-IN DETAIL



**CORNER TRANSITION**  
**PERM-A-BARRIER® HRA WATERPROOFING SYSTEM**

DRAWING: HRA-012  
 SCALE: NOT TO SCALE  
 EFFECTIVE DATE: 07-01-2024  
 SUPERCEDES: N/A