

# Flexible DASH™ 5-Gallon Jug Adhesive



## Overview

Versico's Flexible DASH 5-Gallon Jug Adhesive is a two-component, construction-grade, low-rise polyurethane adhesive designed for bonding Versico's VersiFleece® membranes and/or insulation to various substrates.

The 5-Gallon Jugs' patent-pending design makes them easy to handle and provides moisture resistance, increased durability, and adhesive visibility.

Flexible DASH 5-Gallon Jug Adhesive is compatible with: Versico's Recovery Board, VersiCore® Polyiso, DuraFacer® Polyiso, SecurShield® Polyiso, SecurShield HD, SecurShield HD Plus, expanded polystyrene (EPS), extruded polystyrene (XPS), spray polyurethane foam (new or scarified SPF), DensDeck®, and SECUROCK®.

Compatible deck types include: concrete, cellular lightweight concrete (LWC), gypsum, cementitious wood fiber, wood, and painted or galvanized steel.

Flexible DASH 5-Gallon Jug Adhesive is also compatible with the following roofing materials: smooth (previously exposed) BUR, mineral cap sheets, smooth (previously exposed) or granulated mod bit, aged EPDM, aged TPO, aged Hypalon®, and VapAir Seal™ 725TR Air and Vapor Barrier/Temporary Roof.

## Features and Benefits

- VOC-compliant
- Quick, quiet, low-odor application
- Superior wind uplift resistance/FM approved
- Added puncture resistance of 33 – 50% compared to standard competitive 2-component low-rise adhesives
- Added elongation of up to 150%
- Moisture resistance – Patent-pending jug design provides increased moisture resistance and protection against moisture contamination
- Adhesive visibility – Provides a visible cue for container change-out and in case of an off-ratio mix
- Easy-load handles – Top- and side-load handles allow jugs to be easily loaded on dispensing equipment
- Easy-flow vent – Provides even distribution of adhesive to the static mixing tip
- Increased durability – 5-gallon jug packaging is 4 times stronger than Bag-in-a-Box for better protection against jobsite drops

## Coverage Rates

(Application rates may vary depending on ambient temperatures, surface, and substrate absorption rate)

| Approximate Coverage Rate (Sq. Ft.) | Splatter      | Full Spray  | 4" o.c.   | 6" o.c.       | 12" o.c.      |
|-------------------------------------|---------------|-------------|-----------|---------------|---------------|
|                                     | 1,800 – 2,000 | 600 – 1,000 | 670 – 900 | 1,000 – 1,250 | 2,000 – 2,500 |

VersiFleece membrane or insulation attachment to lightweight concrete, concrete, wood, smooth BUR, mod bit, mineral cap sheets, SPF, or multiple layers of insulation: Please consult Versico for project-specific bead widths and spacing.

# Flexible DASH 5-Gallon Jug Adhesive

## Application

**(Requires a low-pressure urethane adhesive dispensing machine)**

1. The surface to which adhesive is applied shall be dry, free of fins, protrusions, sharp edges, loose and foreign materials, oil, and grease. Depressions greater than ¼" shall be filled with Flexible DASH Adhesive or other approved patching material. All sharp projections shall be removed. **Previously unweathered asphalt must be primed with CAV-GRIP® 3V.**
2. Allow Flexible DASH Adhesive to rise and develop "string/body" (approx. 1 ½ – 2 min.). String time will vary based on environmental conditions like temperature and humidity. Do not allow the adhesive to over-cure prior to setting insulation boards.
3. Seal gaps between the wall/penetration and concrete deck with Versico 725TR or other suitable material to avoid condensation issues and positive pressure from air infiltration.
4. For re-roofing sprayed-in-place (SPF) urethane roofs, all wet areas must be removed. The surface must then be scarified or perforated, depending on the coating, before applying Flexible DASH 5-Gallon Jug Adhesive.
5. Apply Flexible DASH 5-Gallon Jug Adhesive when substrate and ambient temperature are 25°F (-4°C) or above. Material should be applied when internal material temperatures are between 70° – 90°F (21 – 32°C).
6. Remove static mixing nozzle when stopping for more than 30 seconds. Failure to remove nozzle can cause clogging of the low-pressure dispensing machine.
7. High-slope applications may require adhesive to be applied to the bottom of the insulation board to avoid running.
  - For splatter applications, spray adhesive at ½ gallon per square to obtain 50% coverage (approximately ¼" to ½" thick after foaming). Ensure membrane end laps are protected from adhesive.
  - For extruded applications, apply at 4", 6", or 12" on center with a minimum ½" wet bead. Ensure membrane end laps are protected from adhesive.

3. Once "string time" occurs, gradually feed VersiFleece sheet into Flexible DASH Adhesive, checking for "string/body" every few feet. Stop feeding sheet into adhesive when applicator reaches adhesive that has NOT developed "string/body". Immediately begin to roll membrane widthwise with a 150-pound segmented weighted roller. Repeat process until VersiFleece sheet is fully installed.
4. Bead spacing is minimum. Depending on warranty length and wind coverage, bead spacing may be reduced. Refer to published specification and warranty requirements.

### Roll-in (Mod Bit) Method:

1. Keeping the VersiFleece sheet on the core, position roll at the designated starting point.
2. Spray-apply, splatter, or extrude Flexible DASH Adhesive to the substrate.
  - For full spray applications, spray adhesive to obtain full coverage (approximately ¼" to ½" thick after foaming). Ensure membrane end laps are protected from adhesive.
  - For splatter applications, spray adhesive at ½ gallon per square to obtain 50% coverage (approximately ¼" to ½" thick after foaming). Ensure membrane end laps are protected from adhesive.
  - For extruded applications, apply at 4", 6", or 12" on center with a minimum ½" wet bead. Ensure membrane end laps are protected from adhesive.
3. Once "string time" occurs, gradually roll VersiFleece membrane into Flexible DASH Adhesive, checking for "string/body" every few feet. Stop rolling VersiFleece into adhesive when applicator reaches adhesive that has NOT developed "string/body". Immediately begin to roll membrane widthwise with a 150-pound segmented weighted roller. Repeat process until VersiFleece sheet is fully installed.

REVIEW CURRENT VERSICO SPECIFICATIONS AND DETAILS FOR SPECIFIC APPLICATION REQUIREMENTS.

## VersiFleece Membrane Attachment

### Slide-in Method:

1. Unroll VersiFleece sheet and position. Fold the sheet back in half lengthwise (end-to-end).
2. Spray-apply, splatter, or extrude Flexible DASH Adhesive to the substrate.
  - For fully adhered applications, spray adhesive to obtain full coverage (approximately ¼" to ½" thick after foaming). Ensure membrane end laps are protected from adhesive.



# Flexible DASH 5-Gallon Jug Adhesive

## Insulation Attachment

1. Spray-apply, splatter, or extrude Flexible DASH 5-Gallon Jug Adhesive to the substrate at 4", 6", or 12" on center with a minimum ½" wet bead, achieving light-blue colored foam. For steel decks, extrusion of Flexible DASH must run parallel with and be on top of each steel deck flute. The deck must be cleaned of all oils.
  - For splatter applications, spray adhesive at ½ gallon per square to obtain 50% coverage (approximately ¼" to ½" thick after foaming). Ensure membrane end laps are protected from adhesive.
  - For extruded applications, apply at 4", 6", or 12" on center with a minimum ½" bead. Ensure membrane end laps are protected from adhesive.

**Bead spacing parameters for 5-, 10-, 15-, or 20-year, 55-mph warranties are listed below. Contact Versico Project Review for bead spacing on high mph warranties and 30-year warranty projects.**

| Building Height | Bead Spacing (Perimeter) | Bead Spacing (Field) |
|-----------------|--------------------------|----------------------|
| 0' – 25'        | 6" o.c. (4' perimeter)   | 12" o.c.             |
| 26' – 50'       | 6" o.c. (8' perimeter)   | 12" o.c.             |
| 51' – 75'       | 6" o.c. (12' perimeter)  | 12" o.c.             |
| 76' – 100'      | 6" o.c. (16' perimeter)  | 12" o.c.             |
| 101' or greater | 6" o.c. (24' perimeter)  | 12" o.c.             |

2. Factory Mutual bead spacing guidelines for perimeters and corners may differ from the table above. Beads at 12" o.c. are not acceptable at perimeters or corners.
3. Place insulation boards (maximum 4' x 4' boards when adhesive is extruded at 12" o.c. or when boards exceed 4" thickness, or 4' x 8' boards when adhesive is applied at full spray, 4", or 6" beads) into adhesive after allowing it to rise and develop "string/body". String time will vary based on environmental conditions like temperature and humidity. Do not allow the adhesive to over-cure prior to setting insulation boards.
4. Designate one person to walk boards into place and then roll the boards with a 150-pound segmented weighted roller 5 – 7 minutes from the initial adhesive application. Boards may be temporarily weighted or relief cut where necessary to keep the boards in constant contact with the adhesive until the adhesive cures.

5. At the beginning of the insulation attachment process and periodically throughout the day, check the adhesion of boards to ensure a tight bond is created and maximum contact is achieved.

## Precautions

- Review the applicable SDS for complete safety information prior to use.
- The foam produced is an organic material. It must be considered combustible and may constitute a fire hazard. The foam adhesive must not be left exposed or unprotected. Shield from heat and sparks.
- Do not smoke during application.
- Use with adequate ventilation. Avoid breathing vapors. Wear a NIOSH- or MSHA-approved respirator for organic vapors with prefilters and solvent-resistant cartridges if concentrations of MDI exceed the TLV or are unknown. Proper safety training is essential for all persons involved in the installation process. If vapor is inhaled, remove to fresh air and administer oxygen if breathing is difficult. Consult a physician immediately.
- Avoid contact with eyes. Safety glasses or goggles are required. If splashed in eyes, immediately flush eyes with plenty of clean water for at least 15 minutes. Contact a physician immediately.
- Avoid contact with skin. Wear long-sleeved shirts and long pants. Wash hands thoroughly after handling. In case of contact with skin, thoroughly wash affected area with soap and water or corn oil. NOTE: Permeation-resistant gloves that meet ANSI/ISEA 105-2005 are required when handling the material or during application.
- Jobsite storage temperatures in excess of 90°F (32°C) may affect product shelf life. When storing or using adhesive in temperatures below 60°F, the adhesive internal temperature must be returned to 70°F prior to use. Placing adhesive in a heated area (70 – 90°F) for 4 hours should allow liquid adhesive to reach 70 – 90°F.
- Desiccant dryers should be used to prevent atmospheric moisture contamination of the remaining diisocyanate. Even a small amount of contamination by water or other foreign substance could result in excess pressure and catastrophic failure of the jug container. Do not reseal a jug if contamination is suspected. Move container to a well-ventilated area (outside) and allow to stand for at least 48 hours to allow escape of evolved carbon dioxide to avoid hazardous pressure build-up in container.
- KEEP OUT OF THE REACH OF CHILDREN.



# Flexible DASH 5-Gallon Jug Adhesive

## Flexible DASH 5-Gallon Jug Setup



Loading instructions can be found on each containers peel-n-reveal labels.



1. Locate the quick connect fitting on the side handle of each A-side and B-side 5-gallon jug. Next remove quick connect fitting from side handle.



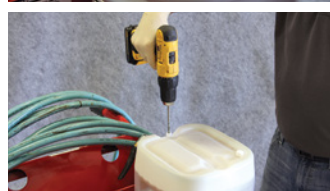
2. Remove 33 mm cap from the jug and remove foil seal. Attach 33 mm quick connect cap by tightening clockwise.



3. Using the top handle and side loading handles, invert 5-gallon jug container onto urethane dispensing cart.



4. Each 5-gallon jug container contains a quick flow port on the bottom of the jug. Each port is predrilled with a guide hole.



5. Remove the quick flow cap and finish drilling quick flow port with a 1/4 drill bit.



6. Once the quick flow port is opened, connect jug to urethane dispensing cart.

**NOTE: Keep the bottom quick flow cap for resealing the jug once material is emptied or for overnight storage.**

## Typical Properties and Characteristics

| Base                                           | Part A (1) Polymeric Isocyanate | Part B (2) Surfactants and Catalysts                           |
|------------------------------------------------|---------------------------------|----------------------------------------------------------------|
| Mixing Ratios by Volume                        | 1:1 Part A to Part B            | —                                                              |
| Viscosity (CPS@25°C)                           | 400                             | 400                                                            |
| MDI Content                                    | 23%                             | —                                                              |
| Avg. Net Weight                                | 9.88 lbs/gal                    | 9.23 lbs/gal                                                   |
| Packaging                                      | 5-gal jug (19 L)                | 5-gal. jug (19 L)                                              |
| Shelf Life                                     | 1 year                          | 1 year                                                         |
| Temperature Requirements (Substrate & Ambient) |                                 | Min. 25°F (Heated Equipment)<br>Min. 25°F (Unheated Equipment) |

Typical properties and characteristics are based on samples tested and are not guaranteed for all samples of this product. This data and information is intended as a guide and does not reflect the specification range for any particular property of this product.

| Physical Property                               | Test Method    | Results                        |
|-------------------------------------------------|----------------|--------------------------------|
| Elongation                                      | ASTM D412      | 150%                           |
| Modulus at 150% Elongation                      | ASTM D412      | 20 psi                         |
| Dynamic Puncture Resistance – OSB               | ASTM D5635-04a | 33% greater than standard DASH |
| Dynamic Puncture Resistance – HP Recovery Board |                | 40% greater than standard DASH |
| Dynamic Puncture Resistance – Polyiso           |                | 50% greater than standard DASH |

## LEED® Information

|                                |              |
|--------------------------------|--------------|
| Pre-consumer Recycled Content  | 0%           |
| Post-consumer Recycled Content | 0%           |
| Manufacturing Location         | Carlisle, PA |
| VOC Content                    | 0 g/L        |

# Flexible DASH 5-Gallon Jug Adhesive

## Substrate Compatibility

| Insulation/Underlayments   |                  | Roof Decks                |                  | Existing Roofing Materials |                      |
|----------------------------|------------------|---------------------------|------------------|----------------------------|----------------------|
| VersiCore                  | Yes              | Concrete                  | Yes              | Smooth BUR                 | Yes                  |
| HP Recovery Board          | Yes              | Cellular Lt. Wt. Concrete | Yes              | Gravel BUR                 | Yes <sup>5</sup>     |
| Expanded Polystyrene (EPS) | Yes <sup>1</sup> | NVS Lt. Wt. Concrete      | Yes              | Mineral Cap Sheet          | Yes                  |
| Extruded Polystyrene       | Yes <sup>2</sup> | Gypsum                    | Yes              | Granular Modified-Bitumen  | Yes                  |
| New Sprayed Foam           | Yes              | Cementitious Wood Fiber   | Yes              | Smooth Modified-Bitumen    | Yes                  |
| Scarified SPF              | Yes              | Plywood/OSB               | Yes              | Coal Tar Pitch             | Yes <sup>6</sup>     |
| DensDeck                   | Yes              | Painted Steel             | Yes              | Aluminum-Coated BUR        | Yes <sup>7</sup>     |
| SECUROCK                   | Yes              | Galvanized Steel          | Yes <sup>3</sup> | Acrylic-Coated SPF         | Yes                  |
| Oriented Strand Board      | Yes              | Acoustical Steel          | Yes <sup>4</sup> | Silicone-Coated SPF        | Yes <sup>8</sup>     |
| SecurShield                | Yes              | Wood Plank                | Yes              | Aged EPDM, Hypalon, TPO    | Yes <sup>9,11</sup>  |
|                            |                  |                           |                  | Unweathered Asphalt        | Yes/No <sup>10</sup> |

- VersiFleece TPO membranes may be installed directly over minimum 1.5-lb.-density EPS; however, to obtain UL & FM codes, an overlayment of Versico Recovery Board, DensDeck, SECUROCK or VersiCore Polyiso insulation is required.
- For insulation attachment only.
- For new galvanized steel decks, power-washing is required to remove finishing oil residue.
- For acoustical steel decks, fill the flutes with fiberglass or other suitable fill insulation and tack in place with strips of duct tape 3' o.c., or other adhesive, prior to spraying the deck with Flexible DASH Adhesive.
- Insulation is required over properly prepared gravel BUR. VersiFleece membrane cannot be installed directly over a gravel/slag surface.
- An insulation providing the necessary R-value must be specified to prevent the coal tar pitch from softening. VersiFleece membranes cannot be installed directly to coal tar pitch.
- Any loose coatings must be removed by power-washing or by physical abrasion prior to the application of Flexible DASH Adhesive. A test installation over the aluminum-coated smooth BUR is recommended to ensure the aluminum coating is fully adhered.
- Silicone-coated substrates must be scarified (coating removed) prior to the application of Flexible DASH Adhesive.
- Power-washing aged Hypalon, or TPO membrane is required prior to the application of Flexible DASH Adhesive.
- Requires CAV-GRIP 3V for all applications.
- Contact Versico for specific requirements on TPO recover.



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