DURO-FLEECE® CR-20 MEMBRANE ADHESIVE

Description:
Duro-Fleece® CR-20 Membrane Adhesive is a two-component adhesive used for adhering Duro-Fleece membrane to a variety of substrates in both new and re-roof applications. It is spray-applied in a "splatter pattern" (Figure 2) onto an approved substrate. The splatter pattern should be evenly distributed and coarse-textured with a thickness between 1/4 and 1/2 inch (Figure 3).

Duro-Fleece CR-20 Membrane Adhesive contains less than 250 g/L of Volatile Organic Compounds (VOC) and meets all VOC restrictions and regulations in the United States.

Note: Only standard formulation may be used to adhere Duro-Fleece membrane. Do not use cold weather formulation for this application.

Acceptable Substrates:
Duro-Fleece CR-20 Membrane Adhesive may be used on the following substrates, after they have been properly prepared, as described in the Duro-Last® *Adhered Duro-Fleece® Roofing System Specification*. The installing contractor is responsible for following all applicable building, plumbing and electrical codes.

- Structural Concrete (poured in place or precast)
- Gypsum (poured in place or precast)
- Lightweight Concrete (insulating or cellular)
- Wood (plywood, OSB or lumber)
- Smooth Built-Up Roofs (BUR)
- Modified Bitumen
- Duro-Guard® Polyisocyanurate Insulation
- Duro-Guard Roof Board

Adhesion Pull Test:
When adhering to an existing roof, an adhesion pull test must be performed to determine the uplift value of the existing roofing system and the adhesion value of the new roof to the existing roof.

Adhesion pull test instructions can be found on the Duro-Last® website. Adhesion Pull Test Kits are available for order from Duro-Last.

Figure 1. A/B Tank Kit or A/B Mini Tank Kit, Hose/Gun Kit, Wrench and Nozzles

Figure 2. Applying Adhesive in Splatter Pattern

Figure 3. Splatter Pattern

Precautions:
1. Read SDS for Part "A" and Part "B" prior to using.
2. Wear proper personal protective equipment, such as gloves and eye protection, per the SDS.
3. Each A/B Tank kit or A/B Mini Tank Kit comes with a "Directions for Use" sheet which must be read prior to using the product. The sheet includes detailed instructions on how to set up the tanks, hose and gun in order to get the most efficient use of the adhesive. It also includes details on proper storage and disposal of the adhesive.

Storage and Shipping:
1. **Keep the product from freezing.**
2. Store the product in a cool, dry location at temperatures between 45° F (7° C) and 95° F (35° C).

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Ordering:
Each A/B Tank Kit will adhere approximately 2,000 square feet of Duro-Fleece membrane. Each A/B Mini Tank Kit will adhere approximately 600 square feet of Duro-Fleece membrane. Application rates will vary depending on the surface roughness and absorption rate of the substrate.

A/B Tank Kit. (Item #4109)

A/B Mini Tank Kit. (Item #4109-001)

Each kit includes:

- "A" & "B" Tanks
- Hose/Gun Kit
- 8 Nozzles
- Wrench
- Installation Instruction Sheet

Installation:

1. Limitations
   a. **Keep the product temperature, before installation, between 70° F (21° C) and 90° F (32° C).**
   b. **Deck and ambient temperatures must not fall below 40° F (4° C) or exceed 100° F (37° C) during installation.**
   c. Do not use during wet weather.
   d. Do not use on wet substrates.
   e. Do not use on dirty or greasy substrates.
   f. Do not use on substrates that show signs of deterioration or loss of structural integrity.
   g. Do not use product after expiration date.
   h. The factory selvage edge and the edge of the membrane where hot-air welding will occur must be protected from overspray of the Duro-Fleece CR-20 Membrane Adhesive.
2. Retrofit-recover projects
   a. Only adhere Duro-Fleece to an acceptable substrate as listed on page 1.
   b. The existing roof system must be investigated to ensure that it is adequately attached.
   c. Broken, delaminated, wet, or damaged insulation or cover boards must be removed and replaced prior to installation.
   d. Existing Phenolic insulation **must** be removed.
3. Position Membrane
   a. Position adjacent sections of Duro-Fleece membrane so that they lay flat and overlap correctly.
   b. Fold the membrane sections to provide an opening to the substrate to which adhesive will be applied. See Figure 2 for an example.
   c. Ensure that the edges of the membrane are protected from contamination by the adhesive. Such contamination will adversely affect the seaming of the membrane.
4. Adhesive Application
   a. Prepare tank set and applicator gun for use as described on the "Directions for use" sheet.
   b. Hold the gun 2 – 3 feet above the roof deck and point downward. Pull the trigger and begin to sweep the gun from side to side in order to distribute the adhesive evenly on the substrate. Apply the adhesive to match the pattern shown in Figure 3 and at a coverage rate of 2,000 square feet per A/B Tank Kit or 600 square feet per A/B Mini Tank Kit.
   c. Replace nozzle tips after spraying has stopped for 1 minute. **Failure to do so will result in improper mixing of adhesives**.
5. Apply Membrane to Adhesive
   a. The bonding time range of Duro-Fleece CR-20 Membrane Adhesive is 1 – 10 minutes from the start of spraying, and will vary according to ambient as well as the substrate temperature. Use the table below to determine when to roll the membrane into the adhesive.

Ambient / Deck Temperature	Time Before Rolling Membrane In
40 – 60° F	6 – 10 Minutes
60 – 80° F	3 – 6 Minutes
80 – 100° F	1 – 3 Minutes

   b. Roll the membrane into adhesive taking care not to induce wrinkles into the sheet and not to contaminate the edges with adhesive.
   c. First, broom the membrane into the adhesive, and then roll the membrane into the adhesive using a 150 lb. roller. Care should be taken not to damage the membrane or contaminate the edges with adhesive.
   d. Complete the seam between membrane sections with a hot-air weld, minimum 1½-inch wide.

TABLE 1. TYPICAL PROPERTIES – BY COMPONENT

Product	A - Component[1]	B - Component[1]
Base	Polymeric Isocyanurate	Polyol Amines
Blowing Agent	134a	134a
Physical Form	Liquid	Liquid
Net Weight (Tank)	40.0 lbs.	35.0 lbs.
Net Weight (Mini Tank)	19.2 lbs.	16.8 lbs.
Specific Gravity (77° F/25° C)	1.23	1.1
Color	Light Brown	Amber to Brown
Volatile Organic Compounds (VOC)	0 g/L	135.6 g/L
VOC When Used as Intended With Both Parts	67.5 g/L	
Flash Point (TCC)	> 200° F (> 93° C)	> 200° F (> 93° C)
Auto Ignition Temperature	> 600° F (> 315° C)	Not Determined
Viscosity (77° F/25° C)	130 cps	150 cps
Mix Ratio	1.14	1

[1] Technical information and data should be considered representative or typical only and should not be used for specification purposes.

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