

*This is an abbreviated guide and is not intended as a substitute for the Long Form CAFECO BLAZE-SHIELD II / ISOLATEK Type II Series Application & Installation Manual. Applicator shall completely and fully read and understand the Long Form Application & Installation Manual prior to applying this product.*

**PUMP REQUIREMENTS:**

Only approved equipment that consists of a hopper, feed auger, carding system, airlock and blower must be used.

**APPROVED EQUIPMENT:**

*Unisul* - All Pneumatic Fireproofing Machines  
*Contractors Consulting Service* - All BOSS Machines.  
*Nordic Machinery* – Blaze King MS-1

**EQUIPMENT SETTINGS:**

*Unisul* - Carding boxes or slide gates should be fully opened.  
*All BOSS Machines* - Discs should be set at position 10.  
*Blaze King MS-1* - Discs should be set at position 12.

When feeding material, empty only one bag of material into machine hopper at a time. When the hopper is one quarter full (three-quarters empty), empty next bag into the hopper.

**ACCEPTABLE NOZZLES:**

2-1/2 in. (64 mm) I.D. RA-9 Airless or 2 in. (51 mm) Inside Diameter (I.D.) or RA-6 Airless nozzles manufactured by Hydra-Cone. The use of an expander sleeve is recommended to provide an even spray pattern.

2-1/2 in. (64 mm) I.D. Boss 8 and 6 jet Airless nozzles manufactured by Contractors Consulting Service.

2-1/2 in. (64 mm) I.D. High output Air/Water nozzle manufactured by Hydra-Cone. The use of an expander sleeve is recommended to provide an even spray pattern.

**Note: A 10 to 20 cfm (280 to 570 liters/min) air compressor providing 60 psi (4.1 kg/cm<sup>2</sup>) air pressure at the nozzle is required when using an Air/Water nozzle.**

**UNACCEPTABLE NOZZLE:**

2 in. (51 mm) or 2-1/2 in. (64 mm) I.D. Hydra-Cone (Center Stem Jet) manufactured by Hydra-Cone.

**WATER RATIO:**

Approximately 1.3 : 1 water to material ratio, by weight. Water pressure should be a minimum of 65 psi (4.4 kg/cm<sup>2</sup>) as measured at the nozzle. Refer to the CAFECO BLAZE-SHIELD II / ISOLATEK Type II Application and Installation Manual for methods to determine water to product ratios.

**WATER BOOSTER PUMP:**

It is mandatory that a water booster pump with a 55 gal. (208 L) reservoir tank is used to ensure proper water pressure and volume.

**HOSE SET-UP:**

**TRANSFER HOSE** must be smooth interior, rubber or plastic with a 2-1/2 in. (64 mm) or 3 in. (76 mm) I.D. Hose must be reinforced to resist kinking or cracking, and must resist static build up. Flexible hose length should not exceed 250 ft. (76 m).

**METAL STANDPIPE** with a 2-1/2 in. (64 mm) to 3 in. (76 mm) I.D. must be used when transfer height exceeds 3 stories or 36 ft. (11 m) or when total length (horizontal plus vertical) of material hose were to exceed 250 ft. (76 m).

**LIGHTWEIGHT FLEX HOSE (WHIP HOSE)** must be smooth interior, rubber or plastic with a 2 in. (51 mm) or 2-1/2 in. (64 mm) I.D. Hose must be lightweight and flexible to allow mobility at the nozzle, and must resist static build up. The maximum whip hose length should not exceed 25 ft. (8 m).

**NOZZLE DISTANCE:**

18 in. (457 mm) to 24 in. (610 mm) from the substrate.

**APPLICATION & THICKNESS:**

The material is conditioned through the application equipment and is pneumatically conveyed through the hose to the nozzle where atomized water is introduced. The spray is then directed at the substrate and applied in an even uninterrupted pattern. The product is left untamped.

For applications greater than 2 in. (51 mm), apply 3/4 in. (19 mm) to 1 in. (25 mm) on the initial coat and allow to dry overnight. The following day(s), apply the remaining thickness in 1 in. (25 mm) to 1-1/2 in. (38 mm) applications, allowing each application to dry overnight before starting the next one.

**WATER OVERSPRAY:**

It is mandatory that the CAFCO BLAZE-SHIELD II HS / ISOLATEK Type II HS be over sprayed with water before the end of the work day. If water overspray is not provided, the minimum bond strengths may not be maintained.

**APPLICATION TEMPERATURE:**

A minimum substrate and ambient temperature of 40°F (4°C) shall be maintained prior to, during and a minimum of 24 hours after the application.

**SURFACE PREPARATION:**

Ensure surfaces are clean and free of dirt, oil, grease, loose mill scale, paints/primers (other than those approved by Isolatek) and any other materials that may impair adhesion. For applications to primed steel, contact Isolatek Technical Services Department. **Note: Some substrates require the use of CAFCO® BOND-SEAL / ISOLATEK® Type EBS or X (adhesive) or metal lath. Refer to the CAFCO BLAZE-SHIELD II / ISOLATEK Type II Application & Installation Manual for specific requirements.**

**VENTILATION:**

Provide a minimum of 4 complete air exchanges per hour until the material is dry.

**WATER TO FIBER RATIO & PRODUCTIVITY:**

1. **DETERMINE THE MAXIMUM WATER OUTPUT:**
  - Establish the maximum water quantity by opening the water valve to the fully open position and directing the spray into a 5 gal (18.9 L) pail\*\* for 1 minute.
  - Measure the height of the water in inches.
  - Compare the height of the water in the pail to the chart below and determine the maximum bag per hour rate.
2. **DETERMINE THE CAFCO BLAZE-SHIELD II HS / ISOLATEK Type II HS FEED RATE:**
  - Measure the time it takes to spray one bag. This is done by spraying material until the hopper is nearly empty. Material should be at the level of the top of the auger in hopper bottom.
  - Turn feed off, empty one bag into hopper.
  - Turn feed on and start stopwatch. When the material reaches the top level of the auger (the initial starting point) stop the stopwatch and record the time. e.g. Assume it takes 2 minutes 30 seconds to spray 1 bag.  
1 bag ÷ 2.5 minutes x 60 min./hr. = 24 bags/hr.
3. Adjust the material feed rate to match the water level measured.

\*\*The 5 gal (18.9 L) pail is similar to the one used for CAFCO BOND-SEAL / ISOLATEK Type EBS or X. Using pails with different dimensions may give erroneous results.

Inches of Water/minute	Time to Spray One Bag	Bags/Hour
2.0	10 min. 43 sec.	5.6
2.5	8 min. 34 sec.	7.0
3.0	7 min. 9 sec.	8.4
3.5	6 min. 7 sec.	9.8
4.0	5 min. 21 sec.	11.2
4.5	4 min. 46 sec.	12.6
5.0	4 min. 17 sec.	14.0
5.5	3 min. 54 sec.	15.4
6.5	3 min. 18 sec.	18.2
7.0	3 min. 4 sec.	19.6
7.5	2 min. 51 sec.	21.0
8.0	2 min. 41 sec.	22.4

**NOTE:** Only the listed equipment, nozzles and procedures are approved for applying CAFCO BLAZE-SHIELD II HS / ISOLATEK Type II HS. Deviations from these requirements will result in product not meeting claims as published in the literature. **For additional information, please contact the Technical Service Department.**



Isolatek International provides passive fireproofing materials under the CAFCO® and FENDOLITE® trademarks throughout the Americas and under the ISOLATEK® trademark throughout the world.

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