

This is an abbreviated guide and is not intended as a substitute for the Long Form CAFCO 400 Application & Installation Manual. Applicator shall completely and fully read and understand the Long Form Application & Installation Manual prior to applying this product.

PUMP REQUIREMENTS:

Mechanical Piston, Hydraulic Piston or Rotor Stator type, open throat, screw feed pump with minimum "No. 4" soft rubber stators must be used.

MIXER REQUIREMENTS:

Paddle or ribbon-type mortar mixer with safety cover and provision for quick dumping of mix directly into the pump hopper. Mixers capable of operating speeds of 35 to 40 RPM, are required. *Note: Continuous mixers may be used but a decrease in yield may occur. Mixers operating at less than required operating speeds may result in short "pot life".*

WATER REQUIREMENTS:

One bag of product requires 9.0 to 10.0 US Gallons (34 to 38 L) of potable water per bag. **A calibrated water meter is required** to ensure constant water volume per mix. *Note: The "five gallon bucket" method is unacceptable.*

MIX TIME:

Product is mixed by first adding potable water to the mixer and then product. Mix for two (2) minutes to achieve the target mixer slurry density. **In a multiple bag mix, the mix time begins after the last bag has been added to the mixer. Do not mix more material than can be used in 30 minutes.**

HOSE SET-UP:

High pressure plaster type hose. Typical diameters (ID) and lengths are listed below.

<u>Total Hose Length</u>	<u>Diameter (ID)</u>	<u>Max. Length</u>
350 feet (107 m)	3 in (76 mm)	@ 50 ft (15 m)
	2 in (51 mm)	@ 200 ft (61 m)
	1-1/2 in (38 mm)	@ 50 ft (15 m)
	1-1/4 in (32 mm)	@ 25 ft (8 m)
	1 in (25 mm)	@ 25 ft (8 m)

Flexible hose length shall not exceed 350 ft. (107 m). Hose couplings shall be pressure rated vicaulic screw-on type that does not restrict product flow. Steel tapered reducers must be used when a reduction in hose is necessary. Brass or aluminum couplings or reducers must not be used.

Metal standpipe 2 in. (51 mm) to 3 in. (76 mm) I.D. must be used when pumping height exceeds 5 stories or 60 ft. (18 m) or when total length (horizontal plus vertical) of material hose exceeds 350 ft. (107 m). Aluminum standpipe must not be used.

NOZZLE REQUIREMENTS:

The spray nozzle assembly must consist of a min. 1 in. (25 mm) I.D. aluminum pole with a blow-off type nozzle cap. Nozzle orifice shall be nominal 1/2 in. (13 mm) I.D.

NOZZLE DISTANCE:

The distance between the nozzle and substrate will vary according to the type of equipment and nozzle used but must be between 12 in. (305 mm) and 18 in. (457 mm).

NOZZLE AIR PRESSURE:

Use the amount of air at the nozzle that results in an even thickness build, texture and proper density. Excessive air will decrease yield. Optimal air pressure is minimum 30 psi (2.1 kg/cm²) as measured at the nozzle.

THICKNESS PER PASS:

Apply 3/8 in. (10 mm) to 1/2 in. (13 mm) on the first pass, 3/4 in. (19 mm) to 1 in. (25 mm) on subsequent passes.

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. **Note: Temperatures of 50°F (10°C) and rising is recommended for improved product performance.**

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 (adhesive), CAFCO® PRE-COAT, or metal lath. All painted substrates must receive CAFCO BOND-SEAL adhesive at 100% coverage installed at a rate of 450 ft²/gallon (11.1 m²/litre). Refer to the CAFCO 400 Long Form Application Manual for specific requirements.**

SET-TIME:

CAFCO 400 sets in approximately 6 to 8 hours. **Do not re-temper the material.**

VENTILATION:

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

SAFETY PRECAUTIONS:

CAFCO 400 is slippery when mixed with water. Do not allow wet material to remain on scaffolds, ladder rungs or floors. Walking on wet material may result in slips or falls. Signage must be posted in areas where the spray application of CAFCO 400 is ongoing to warn other trades of slip hazards.

CALCULATING MIXER DENSITIES:

1. Weigh an empty 1036cc CAFCO cup and tare the scale to account for the cup weight.
2. Fill the cup with material from the pump hopper. Then gently tap the cup on a hard surface to eliminate all air pockets.
3. Level the material with top of cup.
4. Weigh the filled cup in grams.
5. Compare weight in grams to the mixer density in chart below.

ESTIMATING CAFCO 400 MIXER DENSITY FROM WET CUP WEIGHTS

WET CUP WEIGHT (Grams)	MIXER DENSITY Using 9.5 US Gals (36 L) Water	
	PCF	(kg/m ³)
717	43	(689)
733	44	(705)
750	45	(721)
767	46	(737)
783	47	(753)
800	48	(769)
817	49	(785)

Cup Size = 1036cc

CALCULATING NOZZLE DENSITIES:

(Estimating Yield/Bag from Nozzle Wet Cup Weights)

1. Weigh an empty 1036cc CAFCO cup and tare the scale to account for the cup weight.
2. Spray the material directly into the cup. Then tap the cup on a hard surface to eliminate all air pockets.
3. Level the material with the top of the cup.
4. Weigh the filled cup in grams.
5. Compare weight in grams to the nozzle density in chart below.
6. To increase nozzle cup weight, increase atomizing air at the nozzle until target density is achieved.

9.0 gal (34 L)/bag Nozzle Cup weight in grams (Net mat'l wt)	9.25 gal (35 L)/bag Nozzle Cup weight in grams (Net mat'l wt)	9.5 gal (36 L)/bag Nozzle Cup weight in grams (Net mat'l wt)	9.75 gal (37 L)/bag Nozzle Cup weight in grams (Net mat'l wt)	10.0 gal (38 L)/bag Nozzle Cup weight in grams (Net mat'l wt)	DRY DENSITY (Estimated) PCF (kg/m ³)	YIELD Est. Gross Yield/Bag Bd. ft. (m ² @1 mm)
785	797	810	823	835	22 (352)	33 (77)
820	834	847	860	873	23 (368)	31 (74)
856	870	884	898	911	24 (384)	30 (71)
892	906	921	935	949	25 (400)	29 (68)

Note: If you are having difficulty achieving these nozzle cup weights, please contact the Isolotek International Technical Service Department for assistance.

* Nozzle weights are based on a cup with a volume of 1036cc.

Note: UL minimum average density for CAFCO 400 is 22 pcf (352 kg/m³) and the minimum individual density is 19 pcf (304 kg/m³).

NOTE: Only the listed equipment, nozzles and procedures are approved for applying CAFCO 400. 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.**



Isolotek International provides passive fireproofing materials under the CAFCO® trademark throughout the Americas and other markets and under the ISOLATEK® trademark throughout the world.

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