ISOLATEK
Fireproofing innovators since 1875

SHORT FORM APPLICATION GUIDE
CAFCO® 300 AC
(Americas)
ISOLATEK® Type 300 AC
(Worldwide)

This is an abbreviated guide and is not intended as a substitute for the Long Form CAFCO 300 / ISOLATEK Type 300 AC 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:

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 7.75 to 8.75 US Gallons (29 to 33 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.

Total Hose Length	Diameter (ID)		Max. Length
367 feet (112 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)
	3/4 in (19 mm)	@	17 ft (5 m)

Note: Using more than 17 ft. (5 m) of 3/4 in. (19 mm) I.D. whip hose can cause excessive back pressure on pump.

Flexible hose length shall not exceed 367 ft. (112 m). Hose couplings shall be pressure rated victaulic 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 367 ft. (112 m). Aluminum standpipe must not be used.

NOZZLE REQUIREMENTS:

The spray nozzle assembly must consist of a min. 3/4 in. (19mm) I.D. aluminum pole with a blow-off type nozzle cap. Nozzle orifice shall be nominal 5/8 in. (16 mm) I.D. **Note: A 5/8 in. (16 mm) I.D. orifice with the minimum amount of air needed for spraying is required for optimum coverage/density.**

INTRODUCTION OF QWIK-SET:

ISOLATEK® QWIK-SET is required. Typically introduced in-line. When using a 1 in. (25 mm) material hose, the QWIK-SET should be introduced max. 50 ft. (15 m) back from the nozzle; when using a 3/4 in. (19 mm) material hose, the QWIK-SET should be introduced max. 17 ft. (5 m) back from the nozzle. As an alternative, QWIK-SET can be introduced at the nozzle. Refer to ISOLATEK QWIK-SET Short Form Application Guide for further information.

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 24 in. (610 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. Air pressure should make a dull buzzing noise rather than a high pitched sound.

THICKNESS PER PASS:

Apply 1/2 in. (13 mm) to 5/8 in. (16 mm) on the first pass, 3/4 in. (19 mm) to 1 in. (25 mm) on subsequent passes. **Note: Do not apply more than 1-1/2 in. (32 mm) of product in a 24 hour period**. **These are final expanded (accelerated) thicknesses.**

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), CAFCO® PRE-COAT / ISOLATEK® Type PC, or metal lath. Refer to the CAFCO 300 / ISOLATEK Type 300 Series Application & Installation Manual for specific requirements.**

SET-TIME:

CAFCO 300 AC / ISOLATEK Type 300 AC will set in approximately 10 - 20 minutes depending on temperature and humidity conditions. Do not re-temper the product after it sets. See ISOLATEK QWIK-SET Short Form Application Guide for further information.

VENTILATION:

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

SAFETY PRECAUTIONS:

CAFCO 300 AC / ISOALTEK Type 300 AC 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 300 AC / ISOLATEK Type 300 AC is ongoing to warn other trades of slip hazards.

CALCULATING MIXER DENSITIES:

1. Weigh an empty 1036cc 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 300 AC / ISOLATEK Type 300 AC MIXER DENSITY FROM WET CUP WEIGHTS

WET CUP WEIGHT (Grams)		MIXER DENSITY Using 8.5 US Gals (32 L) Water PCF	(kg/m³)
748		45	(721)
781		47	(753)
815	OPTIMUM	49	(785)
846	RANGE	51	(817)
880		53	(849)
914		55	(881)

Cup Size = 1036cc

CALCULATING NOZZLE DENSITIES:
(Estimating Yield/Bag from Nozzle Wet Cup Weights)

1. Weigh an empty 1036cc cup and tare the scale to account for the cup weight.
2. While the pump and atomizing air are running, place the nozzle inside cup and slowly pull back as the cup fills.
3. Level CAFCO 300 AC / ISOLATEK Type 300 AC with the top of cup, being careful not to compress the CAFCO 300 AC / ISOLATEK Type 300 AC. Leveling should be repeated until the material stops swelling in cup. When leveling the CAFCO 300 AC / ISOLATEK Type 300 AC, angle the spatula so that it is cutting the excess material as opposed to troweling/compressing it.
4. Weigh the filled cup in grams.
5. Using the chart below, determine the corresponding density and yield based on the water usage rate and the weight of the cup.
6. Adjust the QWIK-SET flow rate and repeat the steps above until the desired density and yield are achieved.

7.75 gal (29 L)/bag Nozzle Cup Weight in grams (Net mat'l wt)	8.0 gal (30 L)/bag Nozzle Cup Weight in grams (Net mat'l wt)	8.25 gal (31 L)/bag Nozzle Cup Weight in grams (Net mat'l wt)	8.5 gal (32 L)/bag Nozzle Cup weight in grams (Net mat'l wt)	8.75 gal (33 L)/bag Nozzle Cup weight in grams (Net mat'l wt)	DRY DENSITY (Estimated) PCF (kg/m³)	YIELD Est. Gross Yield/Bag Bd. ft. (m²@1 mm)
590	601	611	622	633	17.5 (280)	40 (94)
573	584	594	604	615	17 (272)	41 (97)
540	549	559	569	578	16 (256)	43 (101)
506	515	524	533	547	15 (240)	46 (109)

Note: If you are having difficulty achieving these nozzle cup weights, please contact the Isolatek 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 300 AC / ISOLATEK Type 300 AC is 15 pcf (240 kg/m³) and the minimum individual density is 14 pcf (224 kg/m³). When applying CAFCO 300 AC / ISOLATEK Type 300 AC to cellular deck a minimum average density of 17.5 pcf (280 kg/m³) and a minimum individual density of 16.0 pcf (256 kg/m³) must be maintained. **Warning: Exceeding 46 bd.ft./bag (109 m²@1mm) will result in densities below 15 pcf (240 kg/m³)**

NOTE: Only the listed equipment, nozzles and procedures are approved for applying CAFCO 300 AC / ISOLATEK Type 300 AC. 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.**