

This is an abbreviated guide and is not intended as a substitute for the Long Form ISOLATEK Type M-II (Construction) Application & Installation Manual. Applicator shall completely and fully read and understand the Long Form Application & Installation Manual prior to applying this product.

PUMP REQUIREMENTS:

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 with a 227 L (8 cu. ft.) capacity or larger capable of operating speeds of 35 to 40 RPM, are required.

WATER REQUIREMENTS:

One bag of product requires 17 to 21 L (4.5 to 5.5 US Gal.) 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 three (3) 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.**

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>Length</u>
#4 Stator: 46 m (150 ft)	51mm (2 in)	@ 15* to 30 m (50* to 100 ft)
#6 Stator: 61 m (200 ft)	38 mm (1-1/2 in)	@ 15 m (50 ft)
	32 mm (1-1/4 in)	@ 8 m (25 ft)
	25 mm (1 in)	@ 8 m (25 ft)

* #4 Stator Max 15 m (50 ft), #6 Stator Max 30 m(100 ft)

Hose couplings shall be victaulic screw-on type connect/disconnect that do 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.

NOZZLE REQUIREMENTS:

The spray nozzle assembly must consist of a min. 25 mm (1 in.) or 32 mm (1-1/4 in.) I.D. aluminum pole with a blow-off type nozzle cap. Nozzle orifice shall be nominal 13 mm (1/2 in.) diameter.

NOZZLE DISTANCE:

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

NOZZLE AIR PRESSURE:

Use the amount of air at the nozzle that results in an even thickness build, texture and proper density. Compressed air is required and must be delivered to the nozzle at a minimum volumetric flow rate of 420 L/min (15 cfm) and a minimum pressure of 344 kPa (50 psi).

MINIMUM THICKNESS:

Apply 13 mm (1/2 in.) to 16 mm (5/8 in.) on the first pass and 19 mm (3/4 in.) to 25 mm (1 in.) on subsequent passes. In no case may the coating thickness be less than 13 mm (1/2 in.).

APPLICATION TEMPERATURE:

A minimum substrate and ambient temperature of 4°C (40°F) 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. **Note: Some substrates require the use of ISOLATEK® Type EBS (adhesive), ISOLATEK® Type PC, ISOLATEK® SBK-113, keycoat, and/or mechanical reinforcement. Primed or painted structural steel may adversely affect the bond of spray-applied fire resistive material. When primed or painted structural steel is specified, refer to the guidelines established by the testing laboratory or agency. Refer to the Long Form Application Manual for specific requirements.**

MULTIPLE COATS:

Allow product to “stiffen” before applying subsequent coats. A textured or well scratched surface is necessary to ensure good bonding of subsequent coats. It is optimal that subsequent coats be applied within 48 hours of preceding coats. If surface becomes dry, it must be pre-wet with a mist of potable water prior to applying further coats.

VENTILATION:

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

SAFETY PRECAUTIONS:

ISOLATEK Type M-II 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 ISOLATEK Type M-II 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 ISOLATEK TYPE M-II MIXER DENSITY FROM WET CUP WEIGHTS

WET CUP WEIGHT (Grams)	MIXER DENSITY Using 19 L (5.0 US Gals) Water	
	PCF	(kg/m ³)
814	49.0	(785)
822	49.5	(793)
830	50.0	(801)
838	50.5	(809)
847	51.0	(817)
855	51.5	(825)

Cup Size = 1036cc

CALCULATING NOZZLE CUP WEIGHT & DENSITY:

(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. 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.

4.5 gal (17 L)/bag Nozzle Cup weight in grams (Net mat'l wt)	4.75 gal (18 L)/bag Nozzle Cup weight in grams (Net mat'l wt)	5.0 gal (19 L)/bag Nozzle Cup weight in grams (Net mat'l wt)	5.25 gal (20 L)/bag Nozzle Cup weight in grams (Net mat'l wt)	5.5 gal (21 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)
1052	1077	1102	1128	1153	40 (641)	16.7 (39.4)
1104	1131	1157	1184	1210	42 (673)	15.9 (37.5)
1157	1185	1213	1240	1268	44 (705)	15.1 (35.6)
1210	1239	1268	1297	1325	46 (769)	14.5 (34.2)
1262	1293	1323	1353	1383	48 (769)	13.9 (32.8)
1315	1346	1378	1410	1441	50 (801)	13.3 (31.4)

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: Only the listed equipment, nozzles and procedures are approved for applying ISOLATEK Type M-II. 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.**

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Isolatek 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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