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Fiberglas Finishing Cements, O-C Mastic Finish

FIBERGLAS INSULATING CEMENT FIBERGLAS FINISHING CEMENTS O-C MASTIC FINISH



Fiberglas Insulating Cement (left) is a plastic insulation recommended for application directly on heated equipment, or over metal mesh blankets or block type insulation as a base for finishes. Fiberglas Finishing Cement, Type A (center) gives a smooth surface for painting. Fiberglas Finishing Cement, Type B (right) gives a more granular surface.

FIBERGLAS INSULATING CEMENT provides a monolithic insulation for pipes, tanks, ovens, and other heated equipment; both regular or irregular shapes, indoors and out. It combines good thermal insulating value and ease of application. It may be used over steel, brick, and insulation blocks and blankets. When located outdoors or exposed to moisture or abrasion, a jacket of sheet metal or a coating of O-C Mastic Finish should be applied to protect the cement.

Fiberglas Insulating Cement is made of nodulated Fiber-

glas insulation, dry-mixed with refractory-type materials. It is easily mixed on the job. Approximately 25 gallons of clean fresh water should be used for each 100 lbs. of dry cement. When the cement is to be used on a hot porous surface such as fire brick, an additional 4 gallons per 100 lbs. of cement should be used. When applied and dried, it furnishes soundless dead air walls.

Fiberglas Insulating Cement is easy to apply, a feature that lowers installation time. Other advantages include full reclaimability up to 1000°F., low shrinkage or drying, good adhesive strength, and the provision of an excellent base for either Fiberglas Finishing Cements or O-C Mastic Finish.

Thermal Conductivity of Fiberglas Insulating Cement is not more than .75 Btu sq. ft. per hour, per degree F. temperature difference, per inch thickness of material, at a mean temperature of 300°F.; and .64 Btu at 100°F. mean temperature. (See chart on page 2 for conductivity at various mean temperatures.)

FIBERGLAS FINISHING CEMENTS, TYPES A AND B, are used to provide a smooth finished appearance for insulated pipes, tanks, ovens, and other heated equipment.

Fiberglas Finishing Cements are made of light-density Fiberglas material combined with asbestos fibers and suitable binders. They are easily mixed with approximately 15 to 18½ gallons of clean water for each 100 lbs. of cement used. They may be used as a scratch coat, finish coat, or both. While providing some insulating value, they are not



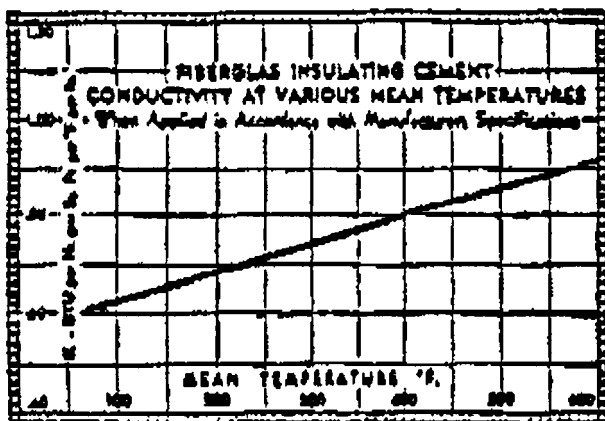
Here are flanges covered with Fiberglas Finishing Cement. Appearance reflects the enduring performance of the product in actual use.

*Illustrated is the trade name (Mark U.S. Pat. Off.) of a variety of products made of or with glass fibers by Owens-Corning Fiberglas Corporation. This sheet under Patent D4.8.1, dated June 1, 1944. Printed in U. S. A.

RECOMMEND THICKNESS FOR INSULATING CEMENT*

° F	Thickness (inches)
Up to 200	1
200 to 400	1½
400 to 600	2½
600 to 800	3
800 to 1000	3½
1000 to 1200	4
1200 to 1400	4½
1400 to 1600	5
1600 to 1800	5½

* Usually applied ½" thick over blankets and blocks as a base coat for desired finish. For built-up applications on irregular surfaces, thicknesses may be used up to the practical limit.



recommended primarily for insulating purposes. They are true finishing cements and are not reclaimable.

Type A Finishing Cement should be used when the highest quality finish is desired. It is easily workable and gives more coverage than Type B Finishing Cement. The latter should be used where a finish combining both economy and good appearance is desired.

When the equipment so finished is exposed to excessive moisture or abrasion, supplementary protection should be provided by use of a light weatherproof jacket of sheet metal or by a coating of O-C Mastic Finish.

O-C MASTIC FINISH is made of an asphalt emulsion to which long asbestos fibers have been added. It is used as a protective finish for the insulation on pipe lines, tanks, boilers, ducts, breechings, converters, digesters and other types of equipment that are exposed to moisture or excessive abrasion. It comes in ready-mixed plastic form of troweling consistency and should be protected against freezing during storage and application.

When applied and dried, it has great durability under extremes of weather, and in most cases is sufficiently elastic so that it will not crack under atmospheric changes. It is recommended for application where adjacent temperatures do not exceed 450°F.

It is easily applied and can be troweled to a smooth surface finish for most permanent results. It is advisable to reinforce with one-inch galvanized wire mesh netting.

Black when applied, it turns to a dark gray color under service.

CHARACTERISTICS OF CEMENT AND FINISHES

For temperature limits, covering capacity, volumetric shrinkage, trowelability, etc., see the table below.

PACKAGING

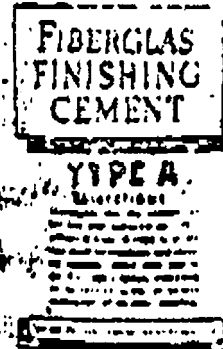
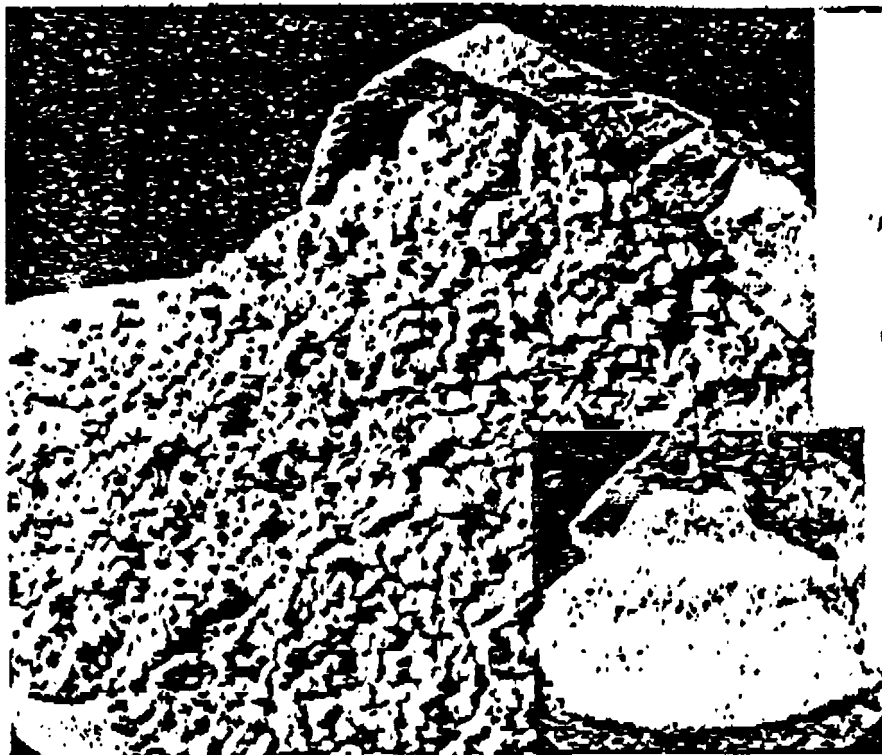
For complete packaging specifications, minimum quantities and prices, see Fiberglas Standards P4.6.1.

APPLICATION OF INSULATING CEMENT

Mixing the Cement. The cement should be mixed in a clean box or other container and may be used at once, although Fiberglas Insulating Cement gives greater troweling ease if allowed to soak over night or if it is mixed with hot water.

Physical Properties	Fiberglas Insulating Cement	Fiberglas Finishing Cement—Type A	Fiberglas Finishing Cement—Type B	O-C Mastic Finish
Wet Coverage	62 board feet per 100 pounds.	36 board feet per 100 pounds.	35 board feet per 100 pounds.	45 sq. ft. ½" thick per 100 pounds.
Dry Coverage	52 board feet per 100 pounds.	30 board feet per 100 pounds.	25 board feet per 100 pounds.	45 sq. ft. ⅝" thick per 100 pounds.
Appearance When Dry	Light tan, relatively smooth, hard finish	Dull white, smooth, hard finish	Dull white, smooth, hard finish	Gray-black, smooth, tough finish
Temperature Limits	Recommended to 1400 degrees F. Can be used to 1800 degrees F. — Fully reclaimable to 1000 degrees F.	No change to 800 degrees F.—slight warpage at 1000 degrees F. Not reclaimable.	Will withstand 800 degrees F.—slight warpage at 1000 degrees F. Not reclaimable.	Will withstand up to 450 degrees F. Not reclaimable.

FIBERGLAS INSULATING CEMENT—FIBERGLAS FINISHING CEMENTS—O-C MASTIC FINISH



Fiberglas Insulating Cement (Type A) is made up of pellets of Fiberglas Wool containing almost countless dead air cells. This cement, mixed, applied and dried, is actually a porous mat of dead air cells assuring low thermal conductivity. Fiberglas Finishing Cement (Type B) provides a suitable finish. It is not used primarily for insulating purposes.

FIBERGLAS® INSULATING CEMENT may be applied on almost any kind of equipment that produces or transfers heat. It provides a monolithic insulation for pipes, tanks, ovens and other types of heated equipment, both regular or irregular shapes, indoors and out, combining excellent thermal insulating value, ease of application and appearance. It may be used over steel, brick, and insulation (brick and blankets). When located outdoors or exposed to moisture or abrasion, a jacket of sheet metal or a coating of O-C Mastic Finish should be applied to protect the cement.

Fiberglas Insulating Cement is made of nodulated Fiber-

glass made by the Owens-Corning Fiberglas Corp. of glass manufactured in any size or amount form by Owens-Corning Fiberglas Corporation.



Here are flanges covered with Fiberglas Insulating Cement. Appearance reflects the enduring performance of the product in actual use.

glass insulation, dry-mixed with refractory-type materials. It is easily mixed on the job. Approximately 2 1/2 gallons of clean fresh water should be used for each 100 lbs. of dry cement. When the cement is to be used on a hot porous surface such as fire brick, an additional 4 gallons per 100 lbs. of cement should be used. When applied and dried, it contains numerous dead air cells that assure low thermal conductivity.

Fiberglas Insulating Cement is easy to apply, a feature that lowers installation time. Other advantages include full reclaimability up to 2000°F., low shrinkage on drying, good adhesive strength, and the provision of an excellent base for either Fiberglas Finishing Cements or O-C Mastic Finish.

Thermal Conductivity of Fiberglas Insulating Cement is not more than .75 Btu sq. ft. per hour, per degree F. temperature difference, per inch thickness of material, at a mean temperature of 300°F.; and .34 Btu at 100°F. mean temperature. (See chart on page 2 for conductivity at various mean temperatures.)

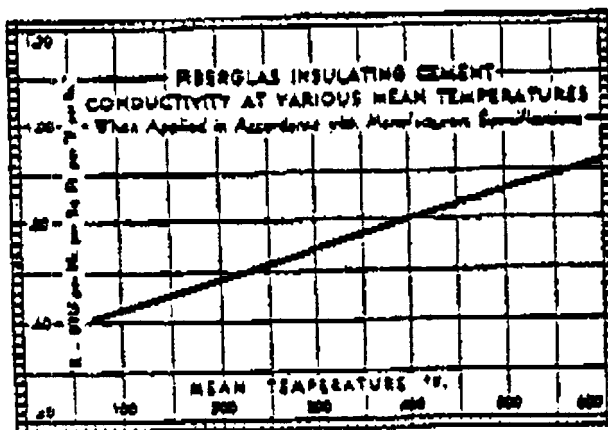
FIBERGLAS FINISHING CEMENTS, TYPES A AND B, are used to provide excellent finished appearance for insulated pipes, tanks, ovens, and other heated equipment.

Fiberglas Finishing Cements are made of ~~high quality~~ Fiberglas material combined with asbestos fibers and suitable binders. They are easily mixed with approximately 1 1/2 to 1 3/4 gallons of clean water for each 100 lbs. of cement used. They may be used as a scratch coat, finish coat, or both. While providing some insulating value, they are not

RECOMMEND THICKNESS FOR INSULATING CEMENT*

° F	Thickness (Inches)
Up to 200	1
200 to 400	1½
400 to 500	2½
500 to 600	3
600 to 700	3½
700 to 900	4
900 to 1100	4½
1100 to 1300	5
1300 to 1600	5½

* Usually applied ½" thick over blankets and blocks as a base coat for desired finish. For built-up applications on irregular surfaces, thicknesses may be used up to the practical limit.



recommended primarily for insulating purposes. They are true finishing cements and are not reclaimable.

Type A Finishing Cement should be used when the highest quality finish is desired. It is easily workable and gives more coverage than Type B Finishing Cement. The latter should be used where a finish combining both economy and good appearance is desired.

When the equipment so finished is exposed to excessive moisture or abrasion, supplementary protection should be provided by use of a light weatherproof jacket of sheet metal or by a coating of O-C Mastic Finish.

O-C MASTIC FINISH is made of an asphalt emulsion to which long asbestos fibers have been added. It is used as a protective finish for the insulation on pipe lines, tanks, boilers, ducts, branchings, converters, digesters and other types of equipment that are exposed to moisture or excessive abrasion. It comes in ready-mixed plastic form of troweling consistency and should be protected against freezing during storage and application.

When applied and dried, it has great durability under extremes of weather, and in most cases is sufficiently elastic so that it will not crack under atmospheric changes. It is recommended for application where adjacent temperatures do not exceed 450°F.

It is easily applied and can be troweled to a smooth surface finish for most permanent results. It is advisable to reinforce with one-inch galvanized wire mesh netting.

Black when applied, it turns to a dark gray color under service.

CHARACTERISTICS OF CEMENT AND FINISHES

For temperature limits, covering capacity, volumetric shrinkage, trowelability, etc., see the table below.

PACKAGING

For complete packaging specifications, minimum quantities and prices, see Fiberglas Standards P4.5.1.

APPLICATION OF INSULATING CEMENT

Mixing the Cement. The cement should be mixed in a clean box or other container and may be used at once, although Fiberglas Insulating Cement gives greater troweling ease if allowed to soak over night or if it is mixed with hot water.

Physical Properties	Fiberglas Insulating Cement	Fiberglas Finishing Cement—Type A	Fiberglas Finishing Cement—Type B	O-C Mastic Finish
Wet Coverage	62 board feet per 100 pounds.	36 board feet per 100 pounds.	35 board feet per 100 pounds.	45 sq. ft. ½" thick per 100 pounds.
Dry Coverage	52 board feet per 100 pounds.	30 board feet per 100 pounds.	25 board feet per 100 pounds.	45 sq. ft. ⅜" thick per 100 pounds.
Appearance When Dry	Light tan, relatively smooth, hard finish	Dull white, smooth, hard finish	Dull white, smooth, hard finish	Grey-black, smooth, tough finish
Temperature Limits	Recommended to 1400 degrees F. Can be used to 1600 degrees F. — fully reclaimable to 1000 degrees F.	No change to 800 degrees F.—slight warpage at 1000 degrees F. Not reclaimable.	Will withstand 800 degrees F.—slight warpage at 1000 degrees F. Not reclaimable.	Will withstand up to 450 degrees F. Not reclaimable.

DOI



The workman is applying a coating of insulating cement, which adheres firmly to the wire netting. When dry, a weatherproof coat of O-C Mastic Finish will be applied.



Plastic and adhesive characteristics of Fiberglas Insulating Cement permit direct application to highly irregular surfaces and around pipe flanges, bends, fittings and valves.

Preparation of Surface. Surfaces to be insulated with Fiberglas Insulating Cement should be cleaned of dirt, loose scale, paint, oil or grease. Paint or grease should be removed with a caustic solution which then should be washed off with clean fresh water. Porous surfaces, such as fire brick, should be wet down thoroughly before the application of the insulating cement. If possible, the surface to be insulated should be kept hot to facilitate drying the cement.

Reinforcement. Anchorage, where required or specified, should be provided in the form of clip angles, nuts or masonry nails of proper size. Additional support is recommended when cement is to be applied to light gauge metallic surfaces or when the surface expansion and contraction is excessive.

Application on Steel Surfaces. Fiberglas Insulating Cement of the recommended thickness (see table page 8) should be built up in separate coats not greater than $\frac{1}{4}$ ". The first coat should be applied on by hand then completely roughed in. Subsequent coats, $\frac{1}{4}$ " thick or less, should be applied after the preceding coats have dried until the total recommended thickness is reached.

When the total insulation thickness is greater than one inch; or when the cement is to be applied to the under side of equipment; or, when the equipment is subject to vibration, a layer of galvanized wire netting should be applied between every second coat. When used, the wire netting should be stretched tightly over the dry cement and securely wired in place with 16 gauge galvanized wire.

Application on Brick Surfaces. Fiberglas Insulating Cement should be applied to a thickness that will result in a safe temperature gradient for all materials in the com-

posite construction. Where reinforcing is required, masonry nails approximately $1\frac{1}{4}$ " long should be driven into the mortar joints on approximately 8- to 12-inch centers so that the heads extend $\frac{1}{4}$ " from the surface of the brick. The first layer of cement should be applied nearly flush with the nail heads. Then galvanized wire netting should be stretched tightly over the cement and secured to the nails. The second layer of insulating cement should be applied approximately $\frac{1}{4}$ " to $\frac{1}{2}$ " thick.

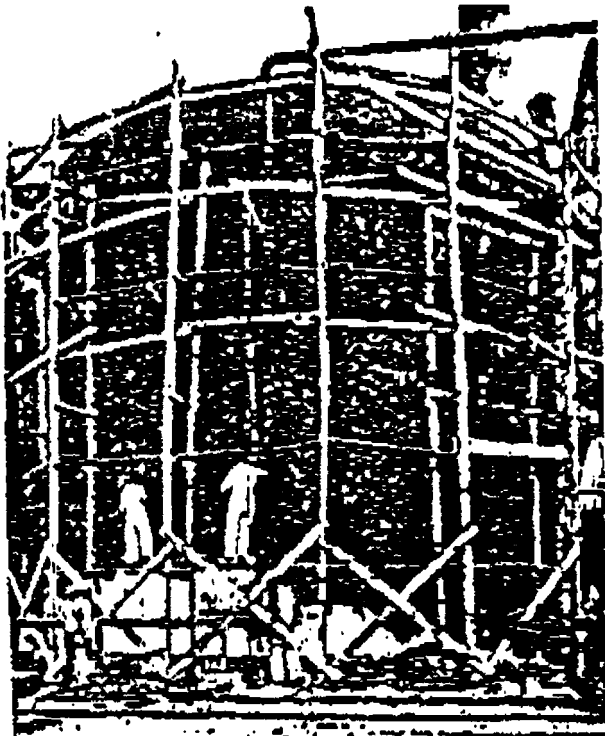
APPLICATION OF FINISH

Fiberglas Insulating Cement may be finished with Fiberglas Finishing Cement if located indoors and not exposed to moisture or abrasion; or with O-C Mastic Finish when located out of doors or exposed to moisture.

Fiberglas Finishing Cement should be applied $\frac{1}{4}$ " to $\frac{1}{2}$ " thick either in one or two coats. If two coats are applied, the first should be applied $\frac{1}{4}$ " thick and the second $\frac{1}{4}$ " thick, allowing the first to dry before the second is applied. In such cases, the first coat should be left rough.

The addition of 25% by weight of portland cement in the last coat of finishing cement gives a harder surface finish.

O-C Mastic Finish is usually applied over a base coat of either insulating or finishing cement. It should be stirred thoroughly in the container before application. Prior to the application of the O-C Mastic Finish and after the cement has thoroughly dried, 1" galvanized wire netting should be stretched tightly over the surface and wired in place with 16 gauge wire. The finish should be smoothed in place approximately $\frac{1}{4}$ " thick (wet), which will dry to about $\frac{1}{8}$ ". It is important that it is smoothed well into the wire netting.



Tank owned by a large paper mill, insulated with Fiberglas Metal Mesh Blankets, covered with $\frac{1}{2}$ " of Fiberglas Insulating Cement and finished with O.C. Mastic Finish.



This Tank was covered with High Temperature Block (1200°), and then Fiberglas Insulating and Finishing Cements were applied over the blocks.

These hot air ducts were entirely insulated with Fiberglas Metal Mesh Blankets. Fiberglas Insulating Cement, covered with Fiberglas Finishing Cement was then applied to secure a highly stable, smooth, hard finish. Note the clean application. Fiberglas Finishing Cement provides an excellent finish and is easy to apply. It lowers time required in installation.

