

SAUEREISEN

HIGH TEMPERATURE MEMBRANE NO. 89

Sauereisen High Temperature Membrane No. 89 is a single-component, asphaltic mastic recommended as an impervious membrane under corrosion-resistant monolithic linings or acid-resistant brick masonry for the protection of metal or concrete substrates. Spray application with airless equipment results in a flexible coating resistant to acids, alkalis and salts associated with flue gas environments and substrate movement from temperature changes or other causes. The product is not recommended for use in oil, grease and solvent environments. No. 89 is not generally recommended for continuous liquid immersion. No. 89 maintains excellent elasticity and adhesion to concrete or steel substrates over a temperature range of -60°F to 300°F.

CHARACTERISTICS

- o Outstanding chemical resistance to acids and alkalis.
- o Recommended for use from -60°F to 300°F.
- o Easy to apply. Can be topcoated within 24 hours.
- o Suitable for application as a membrane on steel or concrete substrates.
- o Excellent elasticity.
- o Very low permeability.

AREA PREPARATION

Temperature of Working Area

Maintain optimal temperatures of 50°F - 100°F on air, substrate and No. 89 material during storage, mixing, application and cure. Dew point of air must also be monitored and substrate temperature must be maintained at least 5°F above dew point.

Store No. 89 mastic in 60° - 90°F range at least 48 hours prior to use.

PHYSICAL PROPERTIES

Flash point, T.O.C., minimum	100°F (38°C)
Maximum service temperature	300°F (148.88°C)
Moisture vapor permeability, perm. inch	0.003
Resistance to abrasion by sandblast	Excellent
Weight solids	69%
Weight (approximate)	9 lbs./gal.
Volatile Organic Compounds (VOC)	388.2 g/L

Physical properties were determined on specimens prepared under laboratory conditions using applicable ASTM procedures. Actual field conditions may vary and yield different results; therefore, data are subject to reasonable deviation.

Installation in higher temperatures are acceptable if material can be properly handled and applied at recommended thickness.

Surface Preparation

Metal - Surfaces must be dry and free of grease, oil and other contaminants that may inhibit the bond of No. 89. Chemical cleaning is recommended.

All welds must be continuous and free of flux. Welds should have a smooth, rounded radius without any sharp edges.

If sharp edges or weld splatter are present, they must be removed prior to application of the membrane. Metal surfaces should be abrasive blasted employing an SSPC-SP6 Commercial Blast with a nominal 2.5 mil profile.

Concrete - Refer to SSPC-SP13/NACE 6 "Surface Preparation of Concrete" for detailed guidelines.

Surfaces must be dry and free of oil, grease and other contaminants that may inhibit bond. This can be achieved by chemical cleaning.

New Concrete - The concrete must be dry, firm, free of laitance and have attained 3,000 psi compressive strength or be structurally sound as specified by architect/engineer. All voids should be filled with Sauereisen Underlayment No. F-120.

Old Concrete - Sandblast or hydroblast surfaces to remove attacked concrete and to obtain a firm surface. All structural cracks should be repaired. Fill all voids with Sauereisen No. F-120 Underlayment. Concrete must be dry, firm and structurally sound as specified by the architect or engineer prior to the No. 89 application.

SPRAY EQUIPMENT

High Temperature Membrane No. 89 must be applied by airless spray equipment. The following spray equipment (or equal) is recommended for application of Sauereisen No. 89.:

Mastic pump - The membrane may be sprayed with a 45:1 piston-primed, airless pump such as the model manufactured by Graco. The current specification for new equipment is the Graco 56:1 King Piston Primed Airless, Model 236-477. Remove the filter from the surge tank. Other pumps may be suitable, depending on job site requirements.

Gun - Graco Hydro-Mastic Gun, Airless, Model 206-718.

Gun tip - Graco Reverse-a-Clean™ tip with 0.045" orifice, Model GHD-745.

Material hose - 6' whip end, 1/2" i.d.; working pressure 5,000 psi, 16,000 psi burst.

Material hose - 50' overall, 3/4" i.d.; working pressure 4,000 psi, 16,000 psi burst.

Material hose - 100' to 150' overall, 1" i.d.; working pressure 3,000 psi, 12,000 psi burst.

Air compressor - 180 ft³ per minute at 100 psi, minimum.

Air hose from compressor - 3/4" to 1" i.d.; 100' maximum length to mastic pump.

APPLICATION

Procedure

Before spraying, Sauereisen No. 89 should be remixed for approximately 2 to 3 minutes with an air mixer and a 5 inch Jiffy blade (or equivalent).

To prevent sagging on vertical surfaces, the required coverage shall be applied in two (2) approximately equal coats. Application shall be done with a 50% overlap in a "cross hatch" pattern to eliminate the possibility of pinholes and assure complete coverage. The second coat should be applied two (2) hours after the first.

SETTING/CURING

No. 89 cures to a soft, flexible, tack-free film in 24 hours at 65°F-85°F. After curing for 24 hours, the monolithic or brick lining may be installed over the membrane. Protect installation site from moisture until membrane has dried to a tack-free condition. Higher temperatures will accelerate the cure and are not detrimental to the material performance.

TESTING

No. 89 Membrane should be tested for pinholes after a 24 hour cure at 70°F. Pinhole testing can be accomplished using a Tinker & Razor Holiday Detector, San Gabriel, CA, Model AP/W or an approved similar model. Voltage requirements are dependent upon application thicknesses. Consult Sauereisen for recommendations.

To repair holidays, lightly sand the surface around the pinholes to break up the film that is produced during cure. No. 89 should then be applied by trowel or spray in a uniform coating to the affected areas.

COVERAGE

Apply in two (2) approximately equal coats of 1/16 inch each, building to a wet film thickness of 1/8 inch (125 mils). Each 5-gallon pail will cover approximately 64ft² at the recommended wet film thickness of 1/8 inch.

CLEAN-UP

All equipment should be cleaned with kerosene or mineral spirits within one (1) hour after use and after each days use. If removal is required after cure, consult Sauereisen for recommendations.

PACKAGING

Sauereisen No. 89 is packaged in either 5-gallon pails or 55-gallon drums.

SHELF LIFE

No. 89 has a shelf life of one (1) year when stored in unopened, tightly sealed containers in a dry location at 70°F. If there is a doubt as to the quality of the materials, consult a Sauereisen representative.

CAUTION

Consult Material Safety Data Sheets and container label Caution Statements for hazards in handling these materials.

WARRANTY

We warrant that our goods will conform to the description contained in the order, and that we have good title to all goods sold. WE GIVE NO WARRANTY, WHETHER OF MERCHANTABILITY, FITNESS FOR PURPOSE OR OTHERWISE, EXPRESS OR IMPLIED, OTHER THAN AS EXPRESSLY SET FORTH HEREIN. We are glad to offer suggestions or to refer you to customers using Sauereisen cements and compounds for a similar application. Users shall determine the suitability of the product for intended application before using, and users assume all risk and liability whatsoever in connection therewith regardless of any suggestions as to application or construction. In no event shall we be liable hereunder or otherwise for incidental or consequential damages. Our liability and your exclusive remedy hereunder or otherwise, in law or in equity, shall be expressly limited to our replacement of nonconforming goods at our factory or, at our sole option, to repayment of the purchase price of nonconforming goods.

- o **Distributors and agents in major cities throughout the world. Consult manufacturer for locations.**
- o **Information concerning government safety regulations available upon request.**
- o **Sauereisen also produces inorganic compounds for assembling, sealing, electrically insulating and grouting.**

SAUEREISEN ...since 1899

160 Gamma Drive
Pittsburgh, PA 15238-2989 USA
Phone 412/963-0303 Fax 412/963-7620
www.sauereisen.com