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

- Outstanding chemical resistance to acids and alkalis.
- Recommended for use from -60°F to 300°F.
- Easy to apply. Can be topcoated within 24 hours.
- Suitable for application as a membrane on steel or concrete substrates.
- Excellent elasticity.
- 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°F - 90°F range at least 48 hours prior to use.

PHYSICAL PROPERTIES

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

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.
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 & Rasor 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 64 ft\(^2\) 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.