

# SAUEREISEN

## EPOXY NOVOLAK MORTAR/SETTING BED NO. 25/25 LT

### PHYSICAL PROPERTIES

	<u>No. 25</u>	<u>No. 25 LT</u> (7 days at 35°F)
Absorption (ASTM C-413)	<0.25%	<0.12%
Application time		
Initial set at 70°F	16 - 18 hours at 73°F	5 hours at 35°F
Working time at 70°F	30 minutes at 73°F	30 minutes at 35°F
Color	Black/Gray/Red	Black/Gray/Red
Compressive strength (ASTM C-579)	16,500 psi	6,500 psi
Density (ASTM C-905)	120.6 pcf	120.6 pcf
Flexural strength (ASTM C-580)	6,400 psi	4,900 psi
Maximum service temperature (ASTM D-648)	180°F	180°F
Modulus of elasticity (ASTM C-580)	4.12 x 10 <sup>5</sup> psi	5.27 x 10 <sup>5</sup> psi
Shrinkage (ASTM C-531)	<0.20%	<0.05%
Tensile strength (ASTM C-307)	3,000 psi	2,100 psi

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. Properties for the cold curing formulation vary by time and temperature.

Sauereisen Epoxy NovolaK Mortar/Setting Bed is a three-component material used for bonding chemical-resistant masonry units. No. 25 is available in 3 versions. The standard grade is combined with brick or tile to protect concrete and steel substrates from attack by corrosive chemicals and physical abuse. The cold curing version, No. 25 LT, is specified for similar applications and accommodates installation temperatures as low as 35°F. Because of its fast setting nature, No. 25 LT is ideal for quick turnaround projects in refrigerated areas.

The water wipable version No. 25 WW is especially designed for tile setters when the ability to clean the tile with water is a benefit. See separate product data sheet for more detailed information.

Nos. 25 and 25 LT are used to construct floors, sumps, trenches, tanks and bleach towers in chemical processing, food & beverage plants; dairies; laboratories; textile, steel and pulp & paper mills. These Sauereisen mortar/setting beds have excellent resistance to strong oxidizing environments, sulfuric acid and some solvents up to 180°F.

All formulations of the NovolaK Epoxy Mortar/Setting Bed provide a strong bond to concrete, brick, tile and other substrates. Used with or without an under-

lying membrane, these products are an important element of an impermeable system of protection.

### CHARACTERISTICS

- o Resists sulfuric acid and strong oxidizing environments.
- o Withstands temperatures to 180°F.
- o Authorized by USDA for use in federally inspected meat and poultry plants.

### AREA PREPARATION

#### Temperature of Working Area

For optimum application conditions, maintain a temperature of 60° - 85°F on air, substrate and No. 25 Powder, Liquid, Hardener, and masonry units during mixing, application, and cure. Maintain materials and substrate between 65°F and 80°F for 48 hours prior to beginning work.

At temperatures below 65°F, the viscosity increases and application becomes more difficult. No. 25 can be applied at temperatures as low as 50°F; however cure time will lengthen. Above 80°F, working time of the material decreases. In higher temperatures it is recommended that the Liquid be cooled by placing

the pail in a large container filled with water and ice or storing in a cool area.

#### Cold Room Applications

For best results, maintain temperatures of 35° - 70°F on air, substrate and No. 25 LT material. Avoid storage or applications below 35°F to ensure proper curing. Above 70°F, working time rapidly decreases.

#### Surface Preparation

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

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

*New Concrete* - All structures must have the necessary strength to withstand imposed loads during normal use and operation. Surface must be floated free of ridges or depressions and all voids filled with Sauereisen Underlayment No. F-120 or No. 209 Filler Compound. The choice of underlayment will depend on the severity of the voids to be filled. Surfaces should be sloped a maximum 1/4 inch per foot for drainage.

Abrasive blast or high-pressure water blast concrete to remove laitance and obtain uniform surface texture exposing fine aggregate resembling coarse sandpaper. Acid etching is only recommended for areas where no alternative means of preparation are viable.

*Old Concrete* - Concrete must be dry and firm and possess the necessary strength to withstand imposed loads during normal use and operation. Ideal surface preparation requires mechanical methods to remove laitance, old paints and previously applied protective coatings.

All structural cracks should be repaired. All slopes should be reestablished with Sauereisen Underlayment No. F-120.

All prepared surfaces must be allowed to dry prior to monolithic application. Regardless of preparation method used, all surfaces must be vacuumed to remove any loose deposits or contamination.

## APPLICATION

### Mixing

Packaging consists of premeasured unitized containers of Hardener Part A, Liquid Part B, and Powder Part C. Remix Part A and B before combining.

Pour Liquid Part B into a clean mixing container. Add Hardener Part A to Liquid Part B. Using a slow speed 1/2 inch drill motor affixed with a "Jiffy" type blade, mix thoroughly for two minutes. Slowly add 2/3 of Powder Part C and mix until all material is wetted out. Then add remainder of Powder and continue mixing until uniform in consistency. Material which has begun to set cannot be retempered and must be discarded.

### Installation

*Brick Layer's Method* - trowel a minimum 1/8 inch thick bed joint of No. 25, or 25 LT, directly on top of the substrate or preceding course of brickwork. Apply the mortar by buttering one side and one end of each brick with a pointing trowel. Set the masonry units in place and position by tapping to form an average 1/8 inch wide vertical joint.

*Tile Setter's Method* - Using a 1/8 inch notched trowel, apply 1/8 inch setting bed directly to the substrate. Set the tile, pavers or splits directly into the wet bed joint. Align the tile while applying pressure to the tile. Once the setting bed has cured enough to allow foot traffic without dislodging or moving tile, grouting may begin. Apply grout by straight edged rubber trowel, taking care to strike all joints at a diagonal rather than parallel or perpendicular.

## FINISHING

Strike extruded mortar off the faces of masonry units with a trowel. For floors where appearance is a factor, waxed brick or tile is recommended.

## CLEAN-UP

All equipment should be cleaned with MEK before the Epoxy NovolaK Mortar/Setting Bed cures. If removal is required after the cure, consult Sauereisen for recommendations.

## SETTING/CURING

**No. 25** - An initial set occurs in 16 to 18 hours at 73°F. The material is ready for service after a three day cure at 73°F. Brickwork should not be subject to water, steam, or chemical environment before the mortar is completely cured.

**No. 25 LT** - Do not expose to water or chemicals for a minimum of 8 hours at 70°F or 17 hours at 35°F. For harsh service environments, cure a minimum of 36 hours at 35°F prior to exposure.

## EXPANSION/CONTROL JOINTS

Joints are to be provided on 20 foot centerlines around all fixed objects, peripheries of rooms and all points of movement in the base slab. Consult Sauereisen for product recommendation.

## PACKAGING

**No. 25** is supplied as a 48.8-lb. unit which includes three components nested within a six-gallon plastic pail:

Part A: Hardener 2.1 lbs./1 - qt. can  
 Part B: Liquid 9.1 lbs/1 - gallon can  
 Part C : Powder 37.6 lbs./poly. bag

**No. 25 LT** is supplied as a 30-lb. unit which includes three components nested within a six-gallon plastic pail:

Part A: Hardener 1.66 lbs./1 - qt. can  
 Part B: Liquid 6.07 lbs./1-gallon can  
 Part C : Powder 22.5 lbs./poly. bag

## Estimating Table - material quantities per square foot

Common floor and tank brick quarry tile sizes

Length (in)	8	8	8	8	8	8	8	8	9	9	9	9
Width (in)	3 <sup>7</sup> / <sub>8</sub>	3 <sup>7</sup> / <sub>8</sub>	4	4	3 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub>	3
Thickness (in)	1 <sup>3</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>8</sub>	1 <sup>3</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>4</sub>	4 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub>	3	4 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>2</sub>
No. of Brick with												
1/8-in joints	4.43	4.43	4.3	4.3	4.58	7.47	3.83	4.58	3.42	3.42	6.02	5.05
Lbs Mortar for												
1/8-in side joints	0.55	0.64	0.62	0.68	1.07	2.53	1.58	2.13	1.04	1.22	2.74	2.40
Lbs Mortar for												
1/8-in setting bed or back joint	← 1.26 →											

The above quantity requirements are based upon physical dimensions of chemical-resistant masonry units and actual weight of mortar as determined by ASTM C-905. Actual usage rate will vary dependent upon scope of installation, experience of workmen, field conditions and other contingencies. Personnel using the above chart should, therefore, add an appropriate wastage factor.

These are packaged to give a mortar consistency. A suggested grout mix ratio by weight is shown below:

	25	25 LT
Resin/Hardener	1	1
Powder	3.0	2.7

## SHELF LIFE

Epoxy NovolaK Mortar/Setting Bed No. 25 Liquid, Hardener, and Powder have a shelf life of one (1) year when stored in unopened, tightly sealed containers in a dry location at 70°F. Avoid freezing. 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

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