



Atlas Minerals & Chemicals, Inc.



# DATA SHEET

3-106PI (3-99<sup>2</sup>)  
Supersedes 3-106PI (1-98)

## REZKLAD® E-125S

### DESCRIPTION

REZKLAD E-125S is a high solids, acid and solvent resistant, spray applied topping.

### TYPICAL USES

REZKLAD E-125S is recommended for spray application on horizontal, vertical and overhead, concrete and steel surfaces. It can be used for floors, walls, ceilings, sumps, trenches and dikes. REZKLAD E-125S offers excellent abrasion resistance for areas of rolling traffic.

### CHEMICAL RESISTANCE

REZKLAD E-125S offers excellent resistance to many food and food by-products, acids, alkalies, salts, oils and greases. It is resistant to organic acids, such as acetic, lactic and maleic acids, and to concentrated hydrochloric acid, 80% sulfuric acid, 25% phosphoric acid and 5% chromic acid. Refer to the chemical resistance chart for specific information.

### METHOD OF INSTALLATION

REZKLAD E-125S is designed for spray application at thicknesses of 1/8" (3.2 mm.) to 3/16" (4.8 mm.) for horizontal surfaces. For vertical and overhead surfaces, as well as immersion service, two 1/16" (1.6 mm.) applications are recommended to achieve a 1/8" (3.2 mm.) minimum thickness.

### AVAILABLE COLORS

Standard colors are gray and red.

### PACKAGING AND COVERAGE

#### REZKLAD E-CONCRETE PRIMER

##### 1/2-Gallon Unit (3 lb. 7 oz. [1.6 kg.]) Consisting of:

One - 1/2-gal. can of Resin (2 lb. 8 oz. [1.1 kg.])

One - 1-pt. can of Hardener (15 oz. [425 g.])

Coverage: Approx. 100 sq. ft. (9.3 m<sup>2</sup>) per unit

##### 1-1/2-Gal. Unit (12 lb. 2 oz. [5.5 kg.]) Consisting of:

One - 1-gal. can of Resin (9 lb. [4.1 kg.])

One - 1/2-gal. can of Hardener (3 lb. 2 oz. [1.4 kg.])

Coverage: Approx. 350 sq. ft. (32.5 m<sup>2</sup>) per unit

### PACKAGING - REZKLAD E-125S

#### 41 lb. 11 oz. (18.9 kg.) Unit Consisting of:

One - 1-gal. can of Resin (7 lb. 1 oz. [3.2 kg.])

Two - 1-qt. cans of Hardener (1 lb. 11 oz. [765 g.]) ea.

One - bag of Powder (31 lb. 4 oz. [14.2 kg.])

## PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	TYPICAL VALUE
Density	ASTM C905	121 lb./cu. ft. (1.94 g./cc.)
Bond Strength, 7 days @ 77°F (25°C)		Concrete fails
Tensile Strength, 7 days @ 77°F (25°C)	ASTM C307	1,300 psi. (9.0 MPa)
Compressive Strength, 7 days @ 77°F (25°C)	ASTM C579	8,500 psi. (58.6 MPa)
Flexural Strength, 7 days @ 77°F (25°C)	ASTM C580	2,700 psi. (18.6 MPa)
Flexural Modulus of Elasticity	ASTM C580	1.2 x 10 <sup>6</sup> psi. (8,300 MPa)
Coefficient of Thermal Exp., in./in./°F (cm./cm./°C)	ASTM C531	3.9 x 10 <sup>-5</sup> (7.0 x 10 <sup>-5</sup> )
Water Absorption	ASTM C413	0.2%
Temperature Resistance Continual Intermittent		180°F (82°C) 220°F (104°C)
Linear Shrinkage	ASTM C531	0.1%
Hardness, Shore D-2		85-90
Abrasion Resistance, Taber CS-17 wh., 1 kg., 1,000 cyc.	ASTM C501	99 mg. weight loss
Flammability Extent of Burn	ASTM D635	Self-extinguishing 13 mm.
Impact Resistance, 1/8" (3.2 mm.) thick, unbonded	Gardner Tester	26 in. lb.

### 249 lb. 14 oz. (113.3 kg.) Unit Consisting of:

One - 5-gal. pail of Resin (42 lb. 6 oz. [19.2 kg.])

One - 5-gal. pail of Hardener (20 lb. [9.1 kg.])

Six - bags of Powder (31 lb. 4 oz. [14.2 kg.]) ea.

### REZKLAD S CLEANER

One - 5-gal. pail (40 lb. [18.1 kg.])

One pail is required each time the spray equipment is cleaned.

### ESTIMATING OF THE REZKLAD E-125S

Thickness	41 lb. 11 oz. (18.9 kg.)	249 lb. 14 oz. (113.3 kg.)
1/8"	33 sq. ft.	200 sq. ft.
3/16"	22 sq. ft.	130 sq. ft.

### SURFACE PREPARATION

REZKLAD E-125S can be applied to concrete and metal surfaces. The substrate must be structurally sound, clean, dry and free of all contaminants such as sealers, curing compounds, coatings, oil, dirt, dust

and water. Previously applied coatings or paint must be removed.

**Concrete:** Finished concrete must be free of ridges, protrusions, fins, mortar splatter and have a tight, laitance-free steel trowel finish. Abrasive grit blasting or acid washing are recommended surface preparation methods. A finish similar to the profile of 100 to 120 grit sandpaper is suggested.

**Metals:** Metal surfaces should be grit blasted to a NACE #1 white metal blast cleaned surface finish. When grit blasting is not practical, clean by wire brushing or with abrasive paper and wash with degreasing solvent such as xylene.

For additional information, refer to Surface Preparation, Data Sheet PS-30.

#### TEMPERATURE DURING APPLICATION

Store REZKLAD E-125S and REZKLAD E-CONCRETE PRIMER at 70°F (21°C) to 80°F (27°C) for 24 hours prior to use. The best working characteristics of the materials will be attained when the temperature of the substrate, air, REZKLAD E-125S and REZKLAD E-CONCRETE PRIMER are between 60°F (16°C) and 85°F (29°C). Minimum temperature for installation is 65°F (18°C). At temperatures below 65°F (18°C), the product may not set or cure properly.

#### MIXING AND APPLICATION OF THE REZKLAD E-CONCRETE PRIMER

Mixing of the components should be done with a hand drill equipped with a "Jiffy" type mixer at a mixing speed between 300 and 500 RPM.

- Combine the contents of the cans of REZKLAD E-CONCRETE PRIMER Resin and Hardener in a suitable mixing container. Mix thoroughly for one minute.
- Apply REZKLAD E-CONCRETE PRIMER with a brush or roller making sure to work it into the pores of the concrete. Do not allow puddling.
- The primed surface should be dry before applying REZKLAD E-125S. If the primer is kept clean, it may be allowed to dry up to the maximum drying time. If the primer is allowed to dry for longer than the maximum drying time, the surface must be sanded and the area reprimed before proceeding.

#### MIXING OF THE REZKLAD E-125S

Mixing of the components should be with a KOL type mixer with a 5-gallon capacity. The mixing speed should be between 60 and 75 RPM.

#### MIX RATIO CHART - REZKLAD E-125S

REZKLAD E-125S	Weight	Volume
REZKLAD E-125S Resin	7 lb. 1 oz. (3.2 kg.)	95 fl. oz. (2.81 liters)
REZKLAD E-125S Hardener	3 lb. 6 oz. (1.5 kg.)	47 fl. oz. (1.39 liters)
REZKLAD S Powder	31 lb. 4 oz. (14.2 kg.)	31 lb. 4 oz. (14.2 kg.) bag
<b>Batch Size</b>	<b>41 lb. 11 oz. (18.9 kg.)</b>	<b>0.34 cu. ft. (9.8 liters)</b>

#### TYPICAL WORKING & DRYING TIMES OF THE REZKLAD E-CONCRETE PRIMER

Temperature	Working Time	Minimum Drying Time	Maximum Drying Time
65°F (18°C)	35 min.	12 hours	48 hours
75°F (24°C)	25 min.	8 hours	48 hours
85°F (29°C)	15 min.	6 hours	24 hours

Set up a mixing station convenient to the installation location. Freshly mixed material must be constantly placed in the spray machine hopper to ensure continual application. A delay in application of 1/2 hour or more at 77°F (25°C) will require all equipment to be thoroughly cleaned. This delay is shorter at higher temperatures.

**First batch:** REZKLAD E-125S should be mixed as described below. However, only 25 lb. (11.3 kg.) of REZKLAD S Powder should be added at Step (b.) to allow for proper wetting out of the hose.

#### 41 lb. 11 oz. (18.9 kg.) Unit:

- Combine the contents of the 7 lb. 1 oz. (3.2 kg.) can of REZKLAD E-125S Resin with the two 1 lb. 11 oz. (765 g.) cans of REZKLAD E-125S Hardener in the 5-gallon capacity mechanical mixer. Mix thoroughly for approximately two minutes.
- Slowly add the 31 lb. 4 oz. (14.2 kg.) bag of REZKLAD S Powder.
- Mix the combined components for approximately two minutes or until all the powder is thoroughly dispersed.

#### 249 lb. 14 oz. (113.3 kg.) Unit:

- Combine 95 fluid ounces (2.81 liters) of REZKLAD E-125S Resin and 47 fluid ounces (1.39 liters) of REZKLAD E-125S Hardener in the 5-gallon capacity mechanical mixer. Mix thoroughly for approximately two minutes.
- Slowly add the 31 lb. 4 oz. (14.2 kg.) bag of REZKLAD S Powder.
- Mix the combined components for approximately two minutes or until all the powder is thoroughly dispersed.

**Note:** The amount of powder may be varied slightly to obtain the desired consistency and to improve flow characteristics. Decreasing the powder component will decrease the estimated coverage.

**APPLICATION OF THE REZKLAD E-125S**

REZKLAD E-125S is applied to surfaces which have been primed with REZKLAD E-CONCRETE PRIMER. REZKLAD E-125S is recommended to be applied using Quikspray® Machine Model #1025E. This Machine is available for rental from ATLAS. Separate "Operating Instructions" are available upon request and are supplied with the unit.

For floors, REZKLAD E-125S is applied at thicknesses of 1/8" (3.2 mm.) to 3/16" (4.8 mm.). For walls and overhead surfaces, as well as immersion service, two 1/16" (1.6 mm.) applications are applied to achieve a 1/8" (3.2 mm.) minimum thickness without sagging. The first coat must be allowed to dry before applying the second coat. Refer to the "Typical Setting Times" chart for specific information.

**Note:** Nearby surfaces not scheduled for application of the REZKLAD E-125S should be draped to protect against overspray.

**FINISH OF THE REZKLAD E-125S**

The normal finish of REZKLAD E-125S offers slip resistance. For a smoother surface, roll the coated surface with ethanol while it is still wet. Wet a short nap roller with ethanol, shake to remove any excess, as this will hinder setting, and roll the surface just long enough to achieve the desired finish. If a coarse finish is desired, apply a second coat at less than 1/8" (3.2 mm.) thickness.

**TYPICAL SETTING TIMES OF THE REZKLAD E-125S**

Temperature	Setting Time	Support Foot Traffic
65°F ( 18°C)	24 hours	72 hours
75°F (24°C)	16 hours	48 hours
85°F (29°C)	12 hours	24 hours

**STORAGE AND SHELF LIFE**

Store all materials in a cool, dry environment. Keep all materials out of direct sunlight. Ideal storage temperature is 75°F (24°C). Protect from freezing. In unopened original containers, the materials referred to in this Data Sheet have a shelf life of approximately one year.

**CLEANING OF TOOLS AND EQUIPMENT**

Steel wool, soap and warm water will remove the materials referred to in this Data Sheet from mixing tools and equipment if cleaning is done immediately after use. Solvents such as methyl ethyl ketone, toluene or xylene will have to be used if the material has begun to harden. Fully hardened material will have to be removed by mechanical means.

REZKLAD S Cleaner is used to clean the Quikspray® Machine. Detailed information is available in the "Operating Instructions".

Dispose of all residues and wastes in accordance with the directions in the Material Safety Data Sheets and government regulations.

**PRODUCT SPECIFICATION**

The system shall be REZKLAD E-125S as manufactured by Atlas Minerals & Chemicals, Inc. The topping shall be spray applied and be resistant to organic and inorganic acids and organic solvents and provide abrasion and wear resistance.

**PRECAUTIONS**

Contact with certain concentrated acids may cause the surface of REZKLAD E-125S to change color. This color change will not affect the chemical resistance.

The materials referred to in this Data Sheet are for Industrial Use Only. They contain materials that present handling and potential health hazards. Consult Material Safety Data Sheets and the container labels for complete precautionary information.

**TECHNICAL SERVICES**

ATLAS maintains a staff of Technical Service Representatives who are available to assist you with the use of ATLAS products. In the event of difficulties with the application of ATLAS materials, the installation should be stopped immediately and ATLAS' Technical Service Department consulted for assistance.

**WARRANTY**

ATLAS warrants that its products will be free from defects in workmanship and materials under normal use for a period of one (1) year from the date of shipment by ATLAS (provided the products are installed before the expiration of the shelf life). THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR THE PURPOSE FOR THIS PRODUCT WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. ATLAS' LIABILITY FOR ALLEGED BREACH OF THIS WARRANTY SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT (BUT NOT INCLUDING REMOVAL OF THE DEFECTIVE PRODUCT OR INSTALLATION OF REPLACEMENT PRODUCTS). ATLAS SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES DURING THE WARRANTY PERIOD OR THEREAFTER. **ATLAS' WARRANTY IS VOIDED IF PAYMENT FOR PRODUCT IS NOT RECEIVED IN FULL.**

**Note:** Atlas makes it a practice to continuously update and enhance our CCM (Corrosion Resistant Construction Materials) products. This may result in slight discrepancies between our printed Data Sheets and the current version. For the most recent version of any Data Sheet, please visit our Web site at [www.atlasmin.com](http://www.atlasmin.com)

## CHEMICAL RESISTANCE OF REZKLAD® E-125S (3-106PI)

Acetic Acid, to 50%	E	Ferric Chloride, Nitrate, Sulfate	E	Perchloroethylene	C	Vegetable Oil	E
Acetic Acid, Glacial	C	Fluosilicic Acid	N	Petroleum	E	Vinegar	E
Acetone	C	Formaldehyde	E	Phenol, to 5%	C	Water, Distilled	E
Alum or Aluminum Sulfate	E	Formic Acid, 10%	E	Phosphoric Acid, to 25%	E	Water, Fresh	E
Ammonium Chloride, Nitrate, Sulfate	E	Fruit Extracts	E	Phosphoric Acid, 25% to 50%	G	Water and Sewage	E
Ammonium Hydroxide, to 30%	E	Fruit Juices	E	Phosphoric Acid, above 50%	C	Wine	E
Aniline	C	Gasoline	E	Pickles	E	Xylene	G
Animal Oils	E	Glucose	E	Picric Acid, to 5%	E	Yeast	E
Bakery Products	E	Glycerine	E	Potassium Bicarbonate, Carbonate	E	Zinc Chloride, Nitrate, Sulfate	E
Barium Chloride, Sulfate	E	Grape Juice	E	Potassium Chloride, Nitrate, Sulfate	E	(3-99 <sup>3</sup> )	
Beer	E	Horse Radish	E	Potassium Hydroxide, to 25%	E		
Benzene	G	Hydrobromic Acid, to 20%	E	Potassium Hydroxide, 25% to 50%	C		
Benzene Sulfonic Acid, 10%	E	Hydrochloric Acid, to 36%	E	Salad Oils	E		
Benzoic Acid	E	Hydrofluoric Acid	N	Salicylic Acid	E		
Black Liquor	E	Hydrofluosilicic Acid	N	Shortening	E		
Boric Acid	E	Hydrogen Peroxide	E	Silver Nitrate	E		
Bromine	C	Hypochlorous Acid, to 5%	E	Skydrol	E		
Butter	E	Ice Cream	E	Smokehouse Residues	E		
Butyl Acetate	C	Jams & Jellies	E	Sodium Bicarbonate, Carbonate	E		
Butyl Alcohol	C	Jet Fuel	E	Sodium Bisulfate, Sulfate	E		
Butyric Acid	G	Kerosene	E	Sodium Chloride, Nitrate, Phosphate	E		
Calcium Chloride, Nitrate, Sulfate	E	Ketchup	E	Sodium Hydroxide, to 25%	G		
Calcium Hydroxide	E	Lactic Acid	E	Sodium Hydroxide, 25% to 50%	N		
Calcium Hypochlorite	E	Lard	E	Sodium Hypochlorite	E		
Carbonated Water	E	Linseed Oil	E	Sodium Sulfide, Sulfite	E		
Casein	E	Lux Liquid	E	Sodium Thiosulfate	E		
Cheese, all	E	Magnesium Chloride, Nitrate, Sulfate	E	Soft Drink Concentrates	E		
Chlorine, Dry	C	Magnesium Hydroxide	E	Soft Drinks	E		
Chlorine, Wet	C	Maleic Acid, 25%	E	Soups	E		
Chlorine Water	E	Malt	E	Soya Oil	E		
Chloroacetic Acid, to 10%	E	Malt Liquors	E	Stearic Acid	E		
Chloroform	E	Margarine	E	Sugar, Saturated Solution	E		
Chromic Acid, to 5%	E	Methyl Alcohol	C	Sulfuric Acid, to 50%	E		
Chromic Acid, 5% to 10%	C	Methyl Ethyl Ketone	C	Sulfuric Acid, 50% to 80%	G		
Cider	E	Methylene Chloride	N	Sulfurous Acid	E		
Citric Acid, to 10%	E	Milk	E	Syrup	E		
Citrus Fruits	E	Mineral Oil	E	Tannic Acid	E		
Coffee	E	Mineral Spirits	E	Tartaric Acid	E		
Copper Chloride, Nitrate, Sulfate	E	Molasses	E	Tea	E		
Corn Oil	E	Muriatic Acid	E	Toluene	G		
Corn Syrup	E	Mustard	E	Toluene Sulfonic Acid	E		
Egg Yolk	E	Nickel Chloride, Nitrate, Sulfate	E	Tomato Juice	E		
Ethyl Acetate	C	Nitric Acid, to 5%	E	Trichloroethylene	C		
Ethyl Alcohol	C	Nitric Acid, 5% to 10%	C	Trisodium Phosphate	E		
Ethyl Ether	E	Oleic Acid	G	Tung Oil	E		
Ethylene Dichloride	N	Olive Oil	E	Turpentine	E		
Ethylene Glycol	E	Oxalic Acid	E	Urea	E		
Fatty Acids	G	Pectin	E	Urine	E		

**KEY**

- E - Excellent
- G - Good
- F - Fair
- N - Not Recommended
- C - Conditional; May be serviceable if the contaminant is immediately removed or washed off the surface.

**Note** - The information presented in the chemical resistance tables is based on judgments derived from laboratory testing and field service performance. The tables have been prepared as a guide to performance. No guarantee of results is made or implied and no liability in connection with this information is assumed. In actual service, floors and walls protected with REZKLAD E-125S are subjected to splash and spillage, as well as dilution effects of wash water, mixing with other solutions, wetting and drying cycles, temperature cycling and cleaning procedures. Contact with certain concentrated acids may cause the surface of REZKLAD E-125S to change color. This color change will not affect the chemical resistance. For immersion service, contact ATLAS for recommendation. The information presented herein should be supplemented by in-service testing. The data furnished in the tables may be revised on the basis of further testing.