



Atlas Minerals & Chemicals, Inc.



DATA SHEET

3-107PI (11-04)
Supersedes 3-107PI (11-01²)

REZKLAD[®] E-125S AR

DESCRIPTION

REZKLAD E-125S AR is a high solids, spray or trowel applied topping designed primarily for the waste and water treatment industry. It is installed exclusively by ATLAS Authorized Applicators.

TYPICAL USES

REZKLAD E-125S AR offers excellent abrasion resistance. It is designed for spray application on horizontal, vertical and overhead, concrete and steel surfaces and trowel application on horizontal and vertical concrete surfaces. REZKLAD E-125S AR is ideal for lift stations, wet wells, manholes, clarifiers, digesters, and other wastewater structures. It can be used for floors, walls, ceilings, sumps, trenches and containment in a variety of industries.

CHEMICAL RESISTANCE

REZKLAD E-125S AR is resistant to many acids, alkalis, salts, oils, greases, food and food by-products. It is resistant to certain solvents, such as ethanol and mineral spirits, and to acidic solutions of 20% hydrochloric acid, 50% sulfuric acid and 25% phosphoric acid. It demonstrates excellent resistance to Hydrogen Sulfide and prevents microbial induced corrosion. Refer to the chemical resistance chart for specific information.

METHOD OF INSTALLATION

REZKLAD E-125S AR is installed exclusively by ATLAS Authorized Applicators.

REZKLAD E-125S AR 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. REZKLAD E-125S AR is trowel applied at 1/16" (1.6 mm) to 1/8" (3.2 mm) 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 m²) per unit

PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	TYPICAL VALUE
Density	ASTM C905	120 lb./cu. ft. (1.92 g./cc.)
Bond Strength, 7 days @ 77°F (25°C)		Concrete fails
Tensile Strength, 7 days @ 77°F (25°C)	ASTM C307	2,000 psi. (13.8 MPa)
Compressive Strength, 7 days @ 77°F (25°C)	ASTM C579	9,000 psi. (62.1 MPa)
Flexural Strength, 7 days @ 77°F (25°C)	ASTM C580	3,500 psi. (24.1 MPa)
Flexural Modulus of Elasticity	ASTM C580	9.0 x 10 ⁵ psi. (6,200 MPa)
Coefficient of Thermal Exp., in./in./°F (cm./cm./°C)	ASTM C531	2.5 x 10 ⁻⁵ (4.5 x 10 ⁻⁵)
Water Absorption	ASTM C413	0.2%
Temperature Resistance Continual Intermittent		140°F (60°C) 175°F (79°C)
Linear Shrinkage	ASTM C531	0.2%
Hardness, Shore D-2		85-90
Abrasion Resistance, Taber CS-17 wh., 1 kg., 1,000 cyc.	ASTM C501	87 mg. weight loss
Flammability Extent of Burn	ASTM D635	Self-extinguishing 5 mm.
Impact Resistance, 1/8" (3.2 mm.) thick, unbonded	Gardner Tester	10 in. lb.

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 m²) per unit

REZKLAD E-125S AR (Spray)

40 lb. 10 oz. (18.4 kg.) Unit Consisting of:

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

Two - 1-qt. cans of Hardener (1 lb. 3 oz. [539 g.]) ea.

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

Coverage: Approx. 32 sq. ft. (3.0 m²) at 1/8" (3.2 mm.)

Approx. 21 sq. ft. (2.0 m²) at 3/16" (4.8 mm.)

243 lb. 10 oz. (110.5 kg.) Unit Consisting of:

One - 5-gal. pail of Resin (42 lb. [19.1 kg.])

Two - 1-gal. cans of Hardener (7 lb. 1 oz. [3.2 kg.]) ea.

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

Coverage: Approx. 194 sq. ft. (18.0 m²) at 1/8" (3.2 mm.)

Approx. 129 sq. ft. (12.0 m²) at 3/16" (4.8 mm.)

NOTE: ATLAS makes it a practice to continuously update and enhance our CCM (Corrosion Resistant Construction Materials) products. For the most recent version of any Data Sheet, please visit our Web site at www.atlasmin.com.

REZKLAD S CLEANER

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

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

REZKLAD E-125S AR (Trowel)

214 lb. 7 oz. (97.3 kg.) Unit Consisting of:

One - 5-gal. pail of Resin (42 lb. [19.1 kg.])

Two - 1-gal. cans of Hardener (7 lb. 1 oz. [3.2 kg.]) ea.

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

Five - cans of ATLAS® T-ADDITIVE (6.7 oz. [190 g.]) ea.

Coverage: Approx. 342 sq. ft. (31.8 m²) at 1/16" (1.6 mm.)

Approx. 171 sq. ft. (15.9 m²) at 1/8" (3.2 mm.)

CHEMPRUF E SMOOTHING LIQUID

1-gal. can (6 lb. 8 oz. [2.9 kg.])

5-gal. pail (32 lb. 8 oz. [14.7 kg.])

Coverage: Approx. 200 sq. ft. (19 m²) per gallon

SURFACE PREPARATION

REZKLAD E-125S AR can be applied to concrete and carbon steel 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.

Carbon Steel: Carbon steel 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 AR 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 AR and REZKLAD E-CONCRETE PRIMER are between 60°F (16°C) and 85°F (29°C).

Minimum temperature for installation is 60°F (16°C). At temperatures below 60°F (16°C), the product may not set or cure properly.

MIXING AND APPLICATION OF THE REZKLAD E-CONCRETE PRIMER

Stir the contents of the individual resin and hardener containers prior to blending. 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. During mixing, move the mixing blade in circular and up and down motions scraping all sides and the bottom of the mixing container.

- Combine the contents of the cans of REZKLAD E-CONCRETE PRIMER Resin and Hardener in a suitable mixing container. Mix thoroughly for one minute as described above.
- 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 tacky or dry before applying REZKLAD E-125S AR. 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.

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

MIXING OF THE REZKLAD E-125S AR (Spray)

Stir the contents of the individual resin and hardener containers prior to blending. 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.

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: Mix 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.

40 lb. 10 oz. (18.4 kg.) Unit:

- Combine the contents of the 7 lb. (3.2 kg.) can of REZKLAD E-125S AR Resin with the two 1 lb. 3 oz. (539 g.) cans of REZKLAD E-125S AR 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.

243 lb. 10 oz. (110.5 kg.) Unit:

- Combine 96 fluid ounces (2.81 liters) of REZKLAD E-125S AR Resin and 37 fluid ounces (1.09 liters) of REZKLAD E-125S AR 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 RATIO CHART - REZKLAD E-125S AR (Spray)

REZKLAD E-125S AR	Weight	Volume
REZKLAD E-125S AR Resin	7 lb. (3.2 kg.)	96 fl. oz. (2.81 liters)
REZKLAD E-125S AR Hardener	2 lb. 6 oz. (1.1 kg.)	37 fl. oz. (1.09 liters)
REZKLAD S Powder	31 lb. 4 oz. (14.2 kg.)	31 lb. 4 oz. (14.2 kg.) bag
Batch Size	40 lb. 10 oz. (18.4 kg.)	0.33 cu. ft. (9.3 liters)

MIX RATIO CHART - REZKLAD E-125S AR (Trowel)

REZKLAD E-125S AR	Weight	Volume
REZKLAD E-125S AR Resin	8 lb. 6 oz. (3.8 kg.)	115 fl. oz. (3.41 liters)
REZKLAD E-125S AR Hardener	2 lb. 13 oz. (1.3 kg.)	44 fl. oz. (1.31 liters)
REZKLAD S Powder	31 lb. 4 oz. (14.2 kg.)	31 lb. 4 oz. (14.2 kg.) bag
ATLAS T-ADDITIVE	6.7 oz. (190 g.)	6.7 oz. (190 g.) can
Batch Size	42 lb. 14 oz. (19.4 kg.)	0.35 cu. ft. (10.0 liters)

- c. 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. The amount of powder must be within 5%, by weight, of the suggested amount.

APPLICATION OF THE REZKLAD E-125S AR (Spray)

REZKLAD E-125S AR is applied to surfaces which have been primed with REZKLAD E-CONCRETE PRIMER.

REZKLAD E-125S AR 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 AR 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 Working & Setting Times of the REZKLAD E-125S AR" chart for specific information.

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

FINISH OF THE REZKLAD E-125S AR (Spray)

The normal finish of REZKLAD E-125S AR offers slip resistance. For a smoother surface, roll the coated surface with CHEMPRUF E SMOOTHING LIQUID while it is still wet. Wet a short nap roller with CHEMPRUF E SMOOTHING LIQUID, 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.

MIXING OF THE REZKLAD E-125S AR (Trowel)

Stir the contents of the individual resin and hardener containers prior to blending. Mixing of the components should be with a KOL type mixer with a 5-gal. capacity. Mixing speed should be between 60 and 75 RPM.

214 lb. 7 oz. (97.3 kg.) Unit:

The following mixing instructions are for a batch size of 42 lb. 14 oz. (19.4 kg.) or 0.35 ft³ (10.0 liters). Estimated coverage of the batch size is 34 ft² (3.2 m²) @ 1/16" (1.6 mm.). Proportionally increase or decrease component quantities to attain larger or smaller batch sizes.

- Combine 115 fluid ounces (3.41 liters) of REZKLAD E-125S AR Resin and 44 fluid ounces (1.31 liters) of REZKLAD E-125S AR Hardener in the 5-gallon capacity mechanical mixer. Mix thoroughly for approximately two minutes.
- Slowly add one 6.7 oz. (190 g.) can of ATLAS T-ADDITIVE. Mix thoroughly for approximately two minutes.
- Slowly add one 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 the powder may be varied slightly to obtain the desired consistency. Decreasing the powder component will decrease the estimated unit coverage. The amount of powder must be within 5%, by weight, of the suggested amount.

APPLICATION OF THE REZKLAD E-125S AR (Trowel)

Place freshly mixed REZKLAD E-125S AR on the properly prepared and primed substrate. For vertical surfaces the primer should be dry. Trowel apply the REZKLAD E-125S AR at a thickness of 1/16" (1.6 mm.) to 1/8" (3.2 mm.) with a plaster's or concrete finishing trowel.

Smooth trowel marks with a short nap roller lightly wetted with CHEMPRUF E SMOOTHING LIQUID. Before rolling, shake the wet roller to remove excess CHEMPRUF E SMOOTHING LIQUID. Use only enough smoothing liquid to prevent picking up of the REZKLAD E-125S AR. Excess smoothing liquid may cause the REZKLAD E-125S AR to remain soft.

TYPICAL WORKING & SETTING TIMES OF THE REZKLAD E-125S AR

Temperature	Working Time	Minimum Drying Time	Support Foot Traffic
65°F (18°C)	40-50 min.	16 hours	48 hours
75°F (24°C)	30-40 min.	12 hours	24 hours
85°F (29°C)	20-30 min.	8 hours	16 hours

STORAGE AND SHELF LIFE

Store all materials in a cool, dry environment. Keep all materials out of direct sunlight and temperatures above 86°F (30°C). Protect from freezing. In unopened original containers, REZKLAD E-CONCRETE PRIMER Resin and Hardener and REZKLAD E-125S AR Resin and Hardener have a shelf life of approximately one year. REZKLAD S Powder, ATLAS T-ADDITIVE, CHEMPRUF E SMOOTHING LIQUID and REZKLAD S Cleaner can be stored indefinitely.

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 AR as manufactured by Atlas Minerals & Chemicals, Inc. The topping shall be spray or trowel 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 AR 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.**

CHEMICAL RESISTANCE OF REZKLAD® E-125S AR (3-107PI)

Acetic Acid, to 5%	E
Acetic Acid, 5% to 10%	G
Acetic Acid, 10% to 50%	N
Acetone	N
Alum or Aluminum Sulfate	E
Ammonium Chloride, Nitrate, Sulfate	E
Ammonium Hydroxide, to 30%	E
Aniline	N
Animal Oils	C
Bakery Products	G
Barium Chloride, Sulfate	E
Beer	E
Benzene	N
Benzene Sulfonic Acid, 10%	E
Benzoic Acid	E
Black Liquor	E
Boric Acid	E
Bromine	N
Butter	C
Butyl Acetate	C
Butyl Alcohol	C
Butyric Acid	N
Calcium Chloride, Nitrate, Sulfate	E
Calcium Hydroxide	E
Calcium Hypochlorite	C
Carbonated Water	E
Casein	G
Cheese, all	G
Chlorine, Dry	C
Chlorine, Wet	C
Chlorine Water	C
Chloroacetic Acid, to 10%	N
Chloroform	E
Chromic Acid, to 5%	C
Chromic Acid, 5% to 10%	N
Cider	F
Citric Acid, to 10%	E
Citrus Fruits	F
Coffee	E
Copper Chloride, Nitrate, Sulfate	E
Corn Oil	G
Corn Syrup	G
Egg Yolk	E
Ethyl Acetate	N
Ethyl Alcohol	E
Ethyl Ether	C
Ethylene Dichloride	N
Ethylene Glycol	E
Fatty Acids	C

Ferric Chloride, Nitrate, Sulfate	E
Fluosilicic Acid	N
Formaldehyde	E
Formic Acid, 10%	C
Fruit Extracts	G
Fruit Juices	G
Gasoline	C
Glucose	F
Glycerine	G
Grape Juice	E
Horse Radish	E
Hydrobromic Acid, to 20%	E
Hydrochloric Acid, to 20%	E
Hydrochloric Acid, 20% to 36%	C
Hydrofluoric Acid	N
Hydrofluosilicic Acid	N
Hydrogen Peroxide	E
Hydrogen Sulfide	E
Hypochlorous Acid, to 5%	N
Ice Cream	E
Jams & Jellies	E
Jet Fuel	E
Kerosene	E
Ketchup	E
Lactic Acid, to 10%	C
Lactic Acid, above 10%	N
Lard	N
Linseed Oil	E
Lux Liquid	E
Magnesium Chloride, Nitrate, Sulfate	E
Magnesium Hydroxide	E
Maleic Acid, 25%	N
Malt	F
Malt Liquors	F
Margarine	F
Methyl Alcohol	G
Methyl Ethyl Ketone	N
Methylene Chloride	N
Milk	E
Mineral Oil	E
Mineral Spirits	E
Molasses	F
Muriatic Acid	E
Mustard	E
Nickel Chloride, Nitrate, Sulfate	E
Nitric Acid, to 10%	C
Oleic Acid	N
Olive Oil	C
Oxalic Acid	E

Pectin	E
Perchloroethylene	N
Petroleum	C
Phenol, to 5%	N
Phosphoric Acid, to 25%	E
Phosphoric Acid, 25% to 50%	C
Phosphoric Acid, above 50%	N
Pickles	E
Picric Acid, to 5%	E
Potassium Bicarbonate, Carbonate	E
Potassium Chloride, Nitrate, Sulfate	E
Potassium Hydroxide, to 25%	E
Potassium Hydroxide, 25% to 50%	C
Salad Oils	C
Salicylic Acid	G
Shortening	C
Silver Nitrate	G
Skydrol	E
Smokehouse Residues	F
Sodium Bicarbonate, Carbonate	E
Sodium Bisulfate, Sulfate	E
Sodium Chloride, Nitrate, Phosphate	E
Sodium Hydroxide, to 25%	C
Sodium Hydroxide, 25% to 50%	N
Sodium Hypochlorite	C
Sodium Sulfide, Sulfite	E
Sodium Thiosulfate	E
Soft Drink Concentrates	C
Soft Drinks	E
Soups	E
Soya Oil	E
Stearic Acid	E
Sugar, Saturated Solution	C
Sulfuric Acid, to 50%	E
Sulfuric Acid, over 50%	N
Sulfurous Acid	E
Syrup	C
Tannic Acid	E
Tartaric Acid	E
Tea	C
Toluene	C
Toluene Sulfonic Acid	E
Tomato Juice	N
Trichloroethylene	E
Trisodium Phosphate	F
Tung Oil	E
Turpentine	E
Urea	E
Urine	E

Vegetable Oil	C
Vinegar	E
Water, Distilled	E
Water, Fresh	E
Water and Sewage	E
Wine	E
Xylene	C
Yeast	E
Zinc Chloride, Nitrate, Sulfate	E

(11-04)

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 AR 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 AR 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.