



## REZKLAD® HP MORTAR

### DESCRIPTION

REZKLAD HP MORTAR is a solvent free, high performance, acid and solvent resistant mortar for structural glazed facing tile and chemical resistant brick construction.

### TYPICAL USES

REZKLAD HP MORTAR is recommended as a pointing mortar for structural glazed facing tile and quarry tile walls. It can also be used as a mortar for brick construction of floors, trenches and sumps. The water washing feature of REZKLAD HP MORTAR eliminates the need for special masking or waxing of the brick or tile to prevent staining. The low odor of the mortar permits application in plants without special ventilation.

REZKLAD HP MORTAR is excellent for the food processing, beverage, pharmaceutical and electronic industries. REZKLAD HP MORTAR is certifiable for use in USDA inspected facilities. It is resistant to food by-products, organic acids, process and sanitizing solutions containing chlorine, phosphoric, nitric and sulfuric acids, hydrogen peroxide and many solvents. REZKLAD HP MORTAR offers resistance to hot water and steam wash downs and will not support the growth of bacteria.

### CHEMICAL RESISTANCE

REZKLAD HP MORTAR is resistant to dilute organic acids, such as 10% acetic, 10% lactic and 10% citric, alkalies and hypochlorite solutions. It's also resistant to organic solvents, such as toluene, xylene and benzene, as well as hydrochloric acid, phosphoric acid, 93% sulfuric acid, 30% nitric acid and 30% chromic acid. Refer to the chemical resistance chart for specific information. REZKLAD HP MORTAR complies with the specifications of ASTM C395 for chemical resistant resin mortars.

### AVAILABLE COLORS

Standard colors are black, gray, white and red.

### PACKAGING - REZKLAD HP MORTAR

#### 18 lb. 3 oz. (8.2 kg.) Unit Consisting of:

- One - 1/2-gal. can of Resin (2 lb. 13 oz. [1.3 kg.])
- One - 1-qt. can of Hardener (1 lb. 7 oz. [652 g.])
- One - bag of Powder (13 lb. 15 oz. [6.3 kg.])
- Nylon Scrub Pad, Rubber Gloves

## PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	TYPICAL VALUE
Density	ASTM C905	118 lb./cu. ft. (1.89 g./cc.)
Bond Strength, 7 days @ 77°F (25°C)	ASTM C321	Brick fails
Tensile Strength, 7 days @ 77°F (25°C)	ASTM C307	2,600 psi. (17.9 MPa)
Compressive Strength, 7 days @ 77°F (25°C)	ASTM C579	11,300 psi. (77.9 MPa)
Flexural Strength, 7 days @ 77°F (25°C)	ASTM C580	4,600 psi. (31.7 MPa)
Coefficient of Thermal Exp., in./in./°F (cm./cm./°C)	ASTM C531	3.3 x 10 <sup>-5</sup> (5.9 x 10 <sup>-5</sup> )
Water Absorption	ASTM C413	0.2%
Temperature Resistance Continual Intermittent		185°F (85°C) 212°F (100°C)
Linear Shrinkage	ASTM C531	0.2%

### 289 lb. 14 oz. (131.5 kg.) Unit Consisting of:

- One - 5-gal. pail of Resin (44 lb. 9 oz. [20.2 kg.])
- One - 5-gal. pail of Hardener (22 lb. 5 oz. [10.1 kg.])
- Eight - bags of Powder (27 lb. 14 oz. [12.6 kg.]) ea.
- Nylon Scrub Pads, Rubber Gloves

### TEMPERATURE DURING APPLICATION

Store REZKLAD HP MORTAR 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 and REZKLAD HP MORTAR are between 60°F (16°C) and 85°F (29°C).

Minimum temperature for installation is 45°F (7°C). At temperatures below 45°F (7°C), the product may not set or cure properly.

### MIXING OF THE REZKLAD HP MORTAR

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.

### 18 lb. 3 oz. (8.2 kg.) Unit

- a. Combine the contents of the 1/2-gallon can (2 lb. 13 oz. [1.3 kg.]) of REZKLAD HP MORTAR Resin with the 1-quart can (1 lb. 7 oz. [652 g.]) of REZKLAD HP MORTAR Hardener in the 5-gallon capacity mechanical mixer. Mix thoroughly for approximately two minutes.

**MIX RATIO CHART - REZKLAD HP MORTAR (POINTING MORTAR)**

REZKLAD HP MORTAR	Weight	Volume
Rezklad HP Mortar Resin	2 lb. 13 oz. (1.3 kg.)	37 fl. oz. (1.10 liters)
Rezklad HP Mortar Hardener	1 lb. 7 oz. (652 g.)	22 fl. oz. (0.65 liters)
Rezklad Mortar Powder*	13 lb. 15 oz. (6.3 kg.)	1/2 of 27 lb. 14 oz. (12.6 kg.) bag
<b>Batch Size</b>	<b>18 lb. 3 oz. (8.2 kg.)</b>	<b>0.15 cu. ft. (4.2 liters)</b>

\*For brick joint applications, remove approximately 1 lb. 6 oz. (624 g.), by weight, or 14 fl. oz. (0.42 liters), by volume, of powder to adjust the mortar consistency.

- Slowly add the 13 lb. 15 oz. (6.3 kg.) bag of REZKLAD MORTAR Powder.
- Mix the combined components for approximately two minutes or until all the powder is thoroughly dispersed.

**Note:** For brick joint applications, remove approximately 1 lb. 6 oz. (624 g.), by weight, or 14 fl. oz. (0.42 liters), by volume, of powder to adjust the mortar consistency.

**289 lb. 14 oz. (131.5 kg.) Unit**

- Evenly divide the contents of one of the 27 lb. 14 oz. (12.6 kg.) bags of REZKLAD MORTAR Powder into two equal parts by volume using two clean, dry 5-gallon pails.
- Combine 37 fluid ounces (1.10 liters) of REZKLAD HP MORTAR Resin and 22 fluid ounces (0.65 liters) REZKLAD HP MORTAR Hardener in the 5-gallon capacity mechanical mixer. Mix thoroughly for approximately two minutes.
- Slowly add a 1/2 bag of REZKLAD MORTAR Powder, 13 lb. 15 oz. (6.3 kg.), as prepared in Step (a.).
- Mix the combined components for approximately two minutes or until all the powder is thoroughly dispersed.

**Note:** For brick joint applications, remove approximately 1 lb. 6 oz. (624 g.), by weight, or 14 fl. oz. (0.42 liters), by volume, from each pail of powder as prepared in Step (a.) to adjust the mortar consistency.

**TYPICAL WORKING & SETTING TIMES OF THE REZKLAD HP MORTAR**

Temperature	Working Time	Support Foot Traffic
45°F (7°C)	65 minutes	24 hours
60°F (16°C)	55 minutes	9 hours
75°F (24°C)	45 minutes	7-1/2 hours
85°F (29°C)	25 minutes	4-1/2 hours

**APPLICATION OF THE REZKLAD HP MORTAR**

REZKLAD HP MORTAR can be used as a pointing mortar for wall tile or as a mortar for chemical resistant brick construction with RED FURNANE® SETTING BED, Data Sheet 5-55PI.

**POINTING MORTAR:** Use standard wall pointing techniques for filling the joints of quarry tile or structural glazed face tile. Maximum joint width for this application is 3/8" (9.5 mm.).

**ESTIMATING TABLES - REZKLAD HP MORTAR****WALL TILE**

Face Size	18 lb. 3 oz. Unit 1/4" Wide Joints Square Feet per Unit			18 lb. 3 oz. Unit 3/8" Wide Joints Square Feet per Unit	
	1/4" Depth	3/8" Depth	1/2" Depth	3/8" Depth	1/2" Depth
2-1/4" x 8"	58 sq. ft.	38 sq. ft.	29 sq. ft.	27 sq. ft.	20 sq. ft.
4" x 8"	84 sq. ft.	56 sq. ft.	42 sq. ft.	38 sq. ft.	29 sq. ft.
4-1/4" x 4-1/4"	68 sq. ft.	45 sq. ft.	34 sq. ft.	31 sq. ft.	23 sq. ft.
5-1/16" x 7-3/4"	96 sq. ft.	64 sq. ft.	48 sq. ft.	44 sq. ft.	33 sq. ft.
5-1/16" x 11-3/4"	110 sq. ft.	73 sq. ft.	55 sq. ft.	50 sq. ft.	37 sq. ft.
6" x 6"	94 sq. ft.	62 sq. ft.	47 sq. ft.	43 sq. ft.	32 sq. ft.
7-5/8" x 7-5/8"	118 sq. ft.	78 sq. ft.	59 sq. ft.	53 sq. ft.	40 sq. ft.
7-5/8" x 11-5/8"	141 sq. ft.	94 sq. ft.	70 sq. ft.	64 sq. ft.	48 sq. ft.
7-3/4" x 7-3/4"	120 sq. ft.	80 sq. ft.	60 sq. ft.	54 sq. ft.	41 sq. ft.
7-3/4" x 11-3/4"	143 sq. ft.	95 sq. ft.	71 sq. ft.	65 sq. ft.	48 sq. ft.
7-3/4" x 15-3/4"	159 sq. ft.	106 sq. ft.	79 sq. ft.	72 sq. ft.	54 sq. ft.
8" x 8"	123 sq. ft.	82 sq. ft.	61 sq. ft.	56 sq. ft.	42 sq. ft.

**BRICK JOINTS:** Install the mortar using conventional bricklaying techniques. Apply the mortar to two sides of the brick forming a “V” profile. Place the brick on the setting bed and slide it into place to attain a 1/8” (3.2 mm.) wide joint. Strike excess mortar before the mortar begins to set.

#### CLEANING OF THE REZKLAD HP MORTAR

The removal of excess mortar must follow closely after the application of the mortar.

##### Recommendations for Cleaning:

1. A small amount of liquid detergent added to warm water will aid the cleaning process.
2. Complete the cleaning of the brick or tile within the working time listed on the “Typical Working & Setting Times” chart.
3. Change cleaning water frequently.
4. Rubber gloves should be worn at all times, including cleaning.
5. Apply a small amount of warm water to the surface of the brick or tile.
6. Using a nylon scrub pad or cellulose sponge, loosen the mortar residue from the brick or tile with a circular motion until a white froth appears.
7. Remove the froth with a cellulose sponge. Apply sufficient pressure to remove residue but not enough to pull mortar from the joints. Frequently rinse and clean the sponge. Repeat cleaning until surface is free of any haze. A clean cellulose sponge may be used for final touch up cleaning.

#### Structural Glazed Facing Tile & Quarry Tile Walls:

A resin rich surface can be achieved by wiping the joints with a rag dampened with mineral spirits before the mortar begins to harden. **NEVER** allow the REZKLAD HP MORTAR to remain on the tile for more than 45 minutes. If the mortar cures on the tile, it must be removed by mechanical means which can damage the face of the tile.

After cleaning is completed, the area must be kept free of liquids and contaminants for at least 16 hours at 77°F (25°C).

#### 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 after the material has begun to harden. Fully hardened material will have to be removed by mechanical means.

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

#### 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.

### ESTIMATING TABLES - REZKLAD HP MORTAR

#### FLOOR AREA

Brick Size	Brick Depth	Pieces per Sq. Ft.	1/8” Wide x Full Depth Joint Square Feet per Unit	
			18 lb. 3 oz. Unit	289 lb. 14 oz. Unit
6” x 6” x 3/4”	3/4”	3.838	58 sq. ft.	930 sq. ft.
8” x 3-7/8” x 1”	1”	4.431	38 sq. ft.	610 sq. ft.
8” x 3-7/8” x 1-3/16”	1-3/16”	4.431	32 sq. ft.	510 sq. ft.
8” x 3-7/8” x 1-3/8”	1-3/8”	4.431	27 sq. ft.	440 sq. ft.
8” x 4” x 1-3/8”	1-3/8”	4.297	28 sq. ft.	450 sq. ft.
8” x 4” x 1-1/2”	1-1/2”	4.297	26 sq. ft.	415 sq. ft.
8” x 3-3/4” x 2-1/4”	2-1/4”	4.574	16 sq. ft.	265 sq. ft.
8” x 3-3/4” x 2-1/4”	3-3/4”	7.462	7 sq. ft.	110 sq. ft.
8” x 3-3/4” x 4-1/2”	3-3/4”	3.832	11 sq. ft.	175 sq. ft.
8” x 3-3/4” x 4-1/2”	4-1/2”	4.574	8 sq. ft.	130 sq. ft.

#### COVE BASE

Cove Size	1/8” Wide x Full Depth Joint Linear Feet per Unit	
	18 lb. 3 oz. Unit	289 lb. 14 oz. Unit
5” H x 6” L x 3/4”	120 lin. ft.	1,945 lin. ft.
5” H x 8” L x 1-3/16”	65 lin. ft.	1,060 lin. ft.
5” H x 8” L x 1-3/8”	55 lin. ft.	915 lin. ft.
3-7/8” H x 8” L x 1-3/8”	80 lin. ft.	1,310 lin. ft.
8” H x 3-3/4” L x 2-1/4”	20 lin. ft.	375 lin. ft.

In unopened original containers, the materials referred to in this Data Sheet have a shelf life of approximately one year.

### **PRODUCT SPECIFICATION**

The mortar shall be REZKLAD HP MORTAR as manufactured by Atlas Minerals & Chemicals, Inc. and be certifiable for use in USDA inspected facilities and comply with the requirements of ASTM C395. The mortar shall be resistant to organic and inorganic acids, organic solvents. During the installation, the mortar shall be low odor, water cleanable and not require a wax coating for the surface of the masonry units.

### **PRECAUTIONS**

Contact with certain concentrated acids may cause the surface of REZKLAD HP MORTAR 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® HP MORTAR (5-38PI)

	80°F	140°F
Acetic Acid, to 10%	R	R
Acetic Acid, 10% to 50%	C	N
Acetone	C	N
Alum or Aluminum Sulfate	R	R
Ammonium Chloride, Nitrate, Sulfate	R	R
Ammonium Hydroxide, to 30%	R	R
Aniline	C	N
Aqua Regia	N	N
Barium Chloride, Sulfate	R	R
Beer	R	R
Benzene	R	R
Benzene Sulfonic Acid, 10%	R	R
Benzoic Acid	R	R
Black Liquor	R	R
Bleaching Liquor, to 2%	R	R
Bleaching Liquor, conc.	N	N
Boric Acid	R	C
Butter	R	R
Butyl Acetate	R	R
Butyl Alcohol	R	R
Butyric Acid	C	N
Calcium Chloride, Nitrate, Sulfate	R	R
Calcium Hydroxide	R	R
Calcium Hypochlorite	R	C
Casein	R	R
Chlorine, Dry	C	C
Chlorine, Wet	C	C
Chlorine Water	R	-
Chloroacetic Acid, to 10%	C	C
Chloroform	R	C
Chromic Acid, to 30%	R	C
Citric Acid, to 10%	R	R
Copper Chloride, Nitrate, Sulfate	R	R
Ecolab "Lift II"	R	R
Ecolab "XY12"	R	R
Ecolab "HC-10"	R	R
Ecolab "Ster-bac"	R	R
Ecolab "P3Oxonia"	R	R
Ecolab "Enforce"	R	R
Ether	R	-
Ethyl Acetate	C	C
Ethyl Alcohol	R	C
Ethylene Dichloride	C	N
Ethylene Glycol	R	R
Fatty Acids	C	C
Ferric Chloride, Nitrate, Sulfate	R	R
Fluosilicic Acid, 30%	RA	RA

	80°F	140°F
Formaldehyde, to 37%	R	R
Formic Acid, 10%	R	C
Grape Juice	R	R
Hydrobromic Acid, to 20%	R	R
Hydrochloric Acid, to 37%	R	R
Hydrofluoric Acid, to 20%	RA	RA
Hydrogen Peroxide	R	C
Hypochlorous Acid, to 5%	R	C
Jet Fuel	R	-
Kerosene	R	-
Lactic Acid, to 5%	R	R
Lactic Acid, 5% to 10%	R	C
Lactic Acid, above 10%	N	N
Lard	R	R
Lux Liquid	R	R
Magnesium Chloride, Nitrate, Sulfate	R	R
Maleic Acid	C	C
Methyl Alcohol	C	C
Methyl Ethyl Ketone	N	N
Methylene Chloride	N	-
Milk	R	R
Mineral Oil	R	R
Nickel Chloride, Nitrate, Sulfate	R	R
Nitric Acid, to 30%	R	R
Oleic Acid	C	C
Oxalic Acid	R	C
Peracetic Acid, 1%	R	R
Perchloroethylene	C	C
Petroleum	R	R
Phenol, to 5%	C	C
Phosphoric Acid	R	R
Picric Acid, to 5%	R	N
Potassium Chloride, Nitrate, Sulfate	R	R
Potassium Hydroxide, to 25%	R	R
Potassium Hydroxide, 25% to 50%	RA	RA
Salt, Saturated Solution	R	R
Sodium Bicarbonate, Carbonate	R	R
Sodium Chloride, Nitrate, Phosphate	R	R
Sodium Hydroxide, to 25%	R	R
Sodium Hydroxide, 25% to 50%	RA	RA
Sodium Hypochlorite, to 6%	R	R
Sodium Hypochlorite, 6% to 12%	R	C
Sodium Sulfate, Sulfide	R	R
Stannic Chloride	R	N
Stearic Acid	C	C
Sugar, Saturated Solution	R	R
Sulfuric Acid, to 93%	R	C

	80°F	140°F
Sulfurous Acid, to 10%	R	R
Toluene	R	R
Toluene Sulfonic Acid	R	C
Tomato Juice	R	R
1,1,1-Trichloroethane	R	R
Trisodium Phosphate	R	R
Turpentine	R	C
Urea, to 20%	R	R
Urine	R	C
Vegetable Oil	R	R
Vinegar	R	R
Water, Fresh	R	R
Water, Distilled	R	R
Water and Sewage	R	R
Xylene	R	R
Zinc Chloride, Nitrate, Sulfate (7-99 <sup>2</sup> )	R	R

### KEY

- R - Recommended
- N - Not Recommended
- C - Conditional; May be serviceable if the contaminant is immediately removed or washed off the surface.
- A - Silica Filler may be attacked.

**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 HP MORTAR 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 HP MORTAR 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.