



Atlas Minerals & Chemicals, Inc.



DATA SHEET

3-40PI (2-07)

ATLAS® EPOXY GROUT

DESCRIPTION

ATLAS EPOXY GROUT is a resinous grout designed for the installation of quarry tile, brick pavers and other tiling units.

TYPICAL USES

ATLAS EPOXY GROUT is unique in that it can be used as a bond coat and floor grout.

ATLAS EPOXY GROUT is designed for commercial applications, such as shopping malls, airports, office foyers, rest rooms and cafeterias. It can be used for more demanding industrial applications including food processing, beverage, pharmaceutical and electronic industries where the durability of a ceramic floor system is required.

ATLAS EPOXY GROUT is also an excellent product for regrouting brick and tile floor joints. ATLAS EPOXY GROUT eliminates the need for special masking or waxing of brick or tile. The product's high bond strength provides maximum adhesion to shallow joints and the low odor does not require special ventilation. For the food processing and beverage industries ATLAS EPOXY GROUT is certifiable for use in USDA regulated food plants.

CHEMICAL RESISTANCE

ATLAS EPOXY GROUT is resistant to dilute acids, alkalis, salts and many cleaning agents and complies with the requirements of ASTM C658 and ANSI A118.3.

METHOD OF INSTALLATION

ATLAS EPOXY GROUT is designed to be installed by the Tilesetter's method. The masonry units are set in a bond coat of ATLAS EPOXY GROUT or a conventional tilesetters thin set bed, followed by the application of ATLAS EPOXY GROUT for the joints.

AVAILABLE COLORS

ATLAS EPOXY GROUT is available in black, gray, light gray, white and red. Custom blended colors are available upon request.

PACKAGING

ATLAS EPOXY GROUT

10 lb. (4.5 kg) Unit Consisting of:

- One - 1-qt. can of Resin (1 lb. 14 oz. [851 g.])
- One - 1-pt. can of Hardener (14 oz. [397 g.])
- One - bag of Powder (7 lb. 4 oz. [3.3 kg.])

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.

PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	TYPICAL VALUE
Density	ASTM C905	116 lb./cu. ft. (1.86 g./cc.)
Bond Strength, 7 days @ 77°F (25°C)	ASTM C321	Brick fails
Tensile Strength, 7 days @ 77°F (25°C)	ASTM C307	2,240 psi. (15.5 MPa)
Compressive Strength, 7 days @ 77°F (25°C)	ASTM C579	12,800 psi. (88.4 MPa)
Flexural Strength, 7 days @ 77°F (25°C)	ASTM C580	5,100 psi. (35.2 MPa)
Coefficient of Thermal Exp., in./in./°F (cm./cm./°C)	ASTM C531	3.0 x 10 ⁻⁵ (5.4 x 10 ⁻⁵)
Water Absorption	ASTM C413	0.35%
Linear Shrinkage	ASTM C531	0.23%
Temperature Resistance Continual Intermittent		140°F (60°C) 212°F (100°C)

44 lb. (20.0 kg.) Unit Consisting of:

- One - 1-gal. can of Resin (8 lb. 3 oz. [3.7 kg.])
- One - 1/2-gal. can of Hardener (3 lb.13 oz. [1.7 kg.])
- One - bag of Powder (32 lb. [14.5 kg.])

215 lb. 9 oz. (97.8 kg.) Unit Consisting of:

- One - 5-gal. pail of Resin (40 lb. [18.1 kg.])
- One - 5-gal. pail of Hardener (18 lb.13 oz. [8.5 kg.])
- Three - bags of Powder (52 lb. 4 oz. [23.7 kg.]) ea.

SURFACE PREPARATION:

Before installing ATLAS EPOXY GROUT as a bond coat, the substrate must be structurally sound, clean, dry and free of all contaminants such as sealers, cleaning compounds, coatings, oil, dirt and dust.

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

TEMPERATURE DURING APPLICATION

Store ATLAS EPOXY GROUT between 70°F (21°C) and 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 concrete substrate, air, masonry units and ATLAS EPOXY GROUT are between 60°F (16°C) and 85°F (29°C). Minimum temperature for installation is 60°F (16°C).

ESTIMATING TABLE - ATLAS EPOXY GROUT

FLOOR AREA

Brick Size	Pieces per Sq. Ft.	Nominal 1/8" Setting Bed & 1/4" Wide x Full Depth Joint Square Feet per Unit			Nominal 1/4" Wide x Full Depth Joint Square Feet per Unit		
		10# Unit	44# Unit	215# 9oz Unit	10# Unit	44# Unit	215# 9oz Unit
6" x 6" x 1/2"	3.686	6 sq. ft.	28 sq. ft.	136 sq. ft.	26 sq. ft.	116 sq. ft.	569 sq. ft.
6" x 6" x 3/4"	3.686	6 sq. ft.	25 sq. ft.	121 sq. ft.	18 sq. ft.	77 sq. ft.	379 sq. ft.
8" x 3-7/8" x 1"	4.231	5 sq. ft.	21 sq. ft.	104 sq. ft.	12 sq. ft.	51 sq. ft.	250 sq. ft.
8" x 3-7/8" x 1-3/16"	4.231	4 sq. ft.	20 sq. ft.	97 sq. ft.	10 sq. ft.	43 sq. ft.	211 sq. ft.
8" x 3-7/8" x 1-3/8"	4.231	4 sq. ft.	18 sq. ft.	90 sq. ft.	8 sq. ft.	37 sq. ft.	182 sq. ft.
8" x 4" x 1/2"	4.107	6 sq. ft.	27 sq. ft.	132 sq. ft.	24 sq. ft.	104 sq. ft.	511 sq. ft.
8" x 4" x 1-3/8"	4.107	4 sq. ft.	19 sq. ft.	91 sq. ft.	9 sq. ft.	38 sq. ft.	186 sq. ft.
8" x 4" x 1-1/2"	4.107	4 sq. ft.	18 sq. ft.	87 sq. ft.	8 sq. ft.	35 sq. ft.	170 sq. ft.
9" x 9" x 3/4"	1.683	6 sq. ft.	28 sq. ft.	135 sq. ft.	26 sq. ft.	114 sq. ft.	558 sq. ft.

Material estimating quantities may vary depending upon job conditions and application techniques. Material quantities above are theoretical and do not include a safety factor.

MIXING OF THE ATLAS EPOXY GROUT

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

10 lb. (4.5 kg.) Unit:

- Combine the contents of the 1-quart can (1 lb. 14 oz. [851 g.]) of ATLAS EPOXY GROUT Resin with the 1-pint can (14 oz. [397 g.]) of ATLAS EPOXY GROUT Hardener in the 5-gallon capacity mechanical mixer. Mix thoroughly for approximately two minutes.
- Slowly add the 7 lb. 4 oz. (3.3 kg.) bag of ATLAS EPOXY GROUT Powder.
- Mix the combined components for approximately two minutes or until all the powder is thoroughly dispersed.

44 lb. (20.0 kg.) Unit:

- Combine the contents of the 1-gallon can (8 lb. 3 oz. [3.7 kg.]) of ATLAS EPOXY GROUT Resin with the 1/2-gallon can (3 lb. 13 oz. [1.7 kg.]) of ATLAS EPOXY GROUT Hardener in the 5-gallon capacity mechanical mixer. Mix thoroughly for approximately two minutes.
- Slowly add the 32 lb. (14.5 kg.) bag of ATLAS EPOXY GROUT Powder.
- Mix the combined components for approximately two minutes or until all the powder is thoroughly dispersed.

215 lb. 9 oz. (97.8 kg.) Unit:

- Combine 109 fluid ounces (3.22 liters) of ATLAS EPOXY GROUT Resin with 60 fluid ounces (1.77 liters) of ATLAS EPOXY GROUT Hardener in the 5-gallon capacity mechanical mixer. Mix thoroughly for approximately two minutes.

- Slowly add 32 lb. (14.5 kg.) of ATLAS EPOXY GROUT 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. Decreasing the powder component will decrease the estimated unit coverage.

MIXING OF THE ATLAS EPOXY GROUT - COVE BASE

ATLAS EPOXY GROUT may be used for the vertical joint of the cove base. Mix the components as described above with the addition of approximately 20% more ATLAS EPOXY GROUT Powder. The amount of powder may be varied to obtain the desired consistency.

APPLICATION OF THE ATLAS EPOXY GROUT

BOND COAT: Apply the ATLAS EPOXY GROUT with a 3/16" V notched trowel, held at a 45 degree angle. Place sufficient amount of material to provide a continuous bond coat complying to the specified thickness.

Do NOT apply more ATLAS EPOXY GROUT than can be covered in 30 to 40 minutes at 75°F (24°C) with the tile or pavers. Grouting can proceed after the material can support foot traffic. Refer to the "Typical Working and Setting Times" chart.

JOINTS: Place the freshly mixed ATLAS EPOXY GROUT on the previously set tile or pavers. It is recommended that the joints be filled the full depth of the tile or paver using a rubber faced trowel. On the last pass hold the trowel with the flat edge at nearly a perpendicular angle to the surface and pull diagonally across the grouted joints, removing as much excess grout as possible from the tile surface.

MIX RATIO CHART - ATLAS EPOXY GROUT

ATLAS EPOXY GROUT	Weight	Volume
ATLAS EPOXY GROUT Resin	8 lb. 3 oz. (3.7 kg.)	109 fl. oz. (3.22 liters)
ATLAS EPOXY GROUT Hardener	3 lb. 13 oz. (1.7 kg.)	60 fl. oz. (1.77 liters)
ATLAS EPOXY GROUT Powder	32 lb. (14.5 kg.)	32 lb. (14.5 kg.) bag
Batch Size	44 lb. (20.0 kg.)	0.380 cu. ft. (10.76 liters)

As an alternative, a steel trowel may be used to grout the tile and a rubber squeegee used to make the final pass.

A second grout pass may be required on pavers 1-3/16" thick or greater to compensate for any settling or low joints. The second pass of grout must be applied within 2 to 24 hours following the initial grout application and cleaning. Occasional voids may form by entrapped air rising to the surface. The voids should be filled upon discovery preferably while the joints are still soft.

TYPICAL WORKING AND SETTING TIMES OF THE ATLAS EPOXY GROUT

Temperature	Working Time	Support Foot Traffic
60°F (16°C)	60 minutes	10-1/2 hours
75°F (24°C)	45 minutes	8 hours
85°F (29°C)	30 minutes	6 hours

CLEANING OF THE ATLAS EPOXY GROUT

The removal of grout residue must follow closely after the application of the grout.

Recommendations for cleaning:

1. A small amount of liquid detergent added to the warm water will aid the cleaning process.
2. Complete the cleaning of the tile within the "working time" listed on the working and 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 tile.
6. Using a nylon scrub pad or cellulose sponge, loosen the grout residue from the 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 grout from the joints. Alternatively, a damp towel or wool blanket can be used by dragging it across the surface of the tile. Frequently rinse and clean the sponge, towel or wool blanket. Repeat the cleaning until surface is free of any haze. A cellulose sponge may be used for final touch up cleaning.

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

REGROUTING EXISTING FLOORS

ATLAS EPOXY GROUT can be used to re-grout existing tile. Saw cut existing joints to a minimum depth of 3/8" (9.5 mm.). Prior to regrouting, remove contaminants, such as oils, greases and dirt with appropriate cleaners. Rinse with clear water and allow to dry. Follow grouting techniques as described in "Application of the ATLAS EPOXY GROUT".

CLEANING OF TOOLS AND EQUIPMENT

Steel wool, soap and warm water will remove the materials referred to in this Data Sheet from mixing tools 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 75oF (24oC). Protect from freezing. In unopened original containers, the materials referred to in this Data Sheet have a shelf life of approximately one year.

PRODUCT SPECIFICATION

The grout shall be ATLAS EPOXY GROUT as manufactured by Atlas Minerals & Chemicals, Inc.

PRECAUTIONS

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 ATLAS® EPOXY GROUT (3-40PI)

	80°F	140°F
Acetic Acid, to 10%	R	C
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 10%	R	R
Ammonium Hydroxide, 10% to 30%	R	C
Aniline	N	N
Aqua Regia	N	N
Barium Chloride, Sulfate	R	R
Beer	R	R
Benzene	N	N
Benzene Sulfonic Acid, 10%	R	C
Benzoic Acid	R	C
Black Liquor	R	N
Bleaching Liquor, to 2%	C	N
Bleaching Liquor, Concentrated	N	N
Boric Acid	R	R
Butyl Acetate	C	N
Butyl Alcohol	C	N
Butyric Acid	C	N
Calcium Chloride, Nitrate, Sulfate	R	R
Calcium Hydroxide	R	R
Calcium Hypochlorite	R	C
Chlorine, Dry	C	-
Chlorine, Wet	N	-
Chlorine Water	C	-
Chloroacetic Acid, to 10%	C	N
Chloroform	C	N
Chromic Acid, to 5%	C	N
Citric Acid, to 10%	R	C
Copper Chloride, Nitrate, Sulfate	R	R
Ether	C	N
Ethyl Acetate	N	N
Ethyl Alcohol	R	C
Ethylene Dichloride	N	N
Ethylene Glycol	R	C
Fatty Acids	N	N
Ferric Chloride, Nitrate, Sulfate	R	C
Fluosilicic Acid, 30%	A	A
Formaldehyde, to 37%	C	N
Formic Acid, 10%	R	C
Grape Juice	C	N
Hydrobromic Acid, to 20%	C	N
Hydrochloric Acid, to 37%	C	N
Hydrofluoric Acid, to 20%	A	A
Hydrogen Peroxide	R	-
Hypochlorous Acid, to 5%	C	N

	80°F	140°F
Jet Fuel	R	-
Kerosene	R	-
Lactic Acid, to 10%	C	C
Lactic Acid, above 10%	N	N
Lard	R	R
Lux Liquid	R	R
Magnesium Chloride, Nitrate, Sulfate	R	R
Maleic Acid	N	N
Methyl Alcohol	C	N
Methyl Ethyl Ketone	N	-
Methylene Chloride	N	-
Milk	R	R
Mineral Oil	R	R
Nickel Chloride, Nitrate, Sulfate	R	R
Nitric Acid, to 40%	N	N
Oleic Acid	C	N
Oxalic Acid	C	N
Perchloroethylene	N	N
Petroleum	R	N
Phenol, to 5%	C	-
Phosphoric Acid	R	C
Picric Acid, to 5%	C	N
Potassium Chloride, Nitrate, Sulfate	R	R
Potassium Hydroxide, to 25%	R	R
Potassium Hydroxide, 25% to 50%	RA	RA
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	C
Sodium Hypochlorite, 6% to 16%	N	N
Sodium Sulfate, Sulfide	R	R
Stannic Chloride	R	N
Stearic Acid	C	N
Sugar, Saturated Solution	R	R
Sulfuric Acid, to 10%	R	C
Sulfuric Acid, 10% to 50%	C	N
Sulfuric Acid, above 50%	N	N
Sulfurous Acid, to 10%	R	C
Toluene	N	N
Toluene Sulfonic Acid	R	C
Tomato Juice	C	N
1,1,1-Trichloroethane	N	N
Trisodium Phosphate	R	R
Turpentine	R	-
Urea, to 20%	R	R
Urine	R	C
Vegetable Oil	R	R

	80°F	140°F
Vinegar	R	C
Water, Fresh	R	R
Water, Distilled	R	R
Water and Sewage	R	R
Xylene	C	N
Zinc Chloride, Nitrate, Sulfate	R	R

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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 ATLAS EPOXY GROUT 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. 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.