



Atlas Minerals & Chemicals, Inc.



# DATA SHEET

3-301DS (8-00<sup>2</sup>)  
Supersedes 3-301DS (1-98)

## UREKLAD® 180

### DESCRIPTION

UREKLAD 180 is a self-leveling, polyurethane elastomeric floor topping applied in thicknesses of 1/8" (3.2 mm.) to 1/4" (6.4 mm.). The system consists of:

**UREKLAD PRIMER:** A brush or roller applied penetrating primer.

**UREKLAD 180:** A three-component, trowel, screed or gauge rake applied floor topping.

**UREKLAD CT-80:** A three-component, trowel and roller applied textured topcoat.

### TYPICAL USES

UREKLAD 180 is a flexible, abrasion, and corrosion resistant floor topping with the ability to provide waterproofing. UREKLAD 180 resists damage from thermal cycling and is recommended for continuous service temperatures. It reduces fatigue where people stand or walk for prolonged periods on concrete. It is ideal for industrial processing and storage areas, aisles, hallways and locker rooms. UREKLAD 180 can elongate sufficiently to bridge narrow cracks in the concrete substrate and resist damage from floor vibration. UREKLAD 180 is certifiable for use in USDA inspected facilities.

### SUBSTRATE

UREKLAD 180 is designed to be applied to new or existing concrete, wood or metal surfaces.

### OPTIONS

**Color:** Standard colors are beige, gray, green and red.

**Cove Base:** Form using UREKLAD CT-80.

**Finishes:** Apply UREKLAD CT-80 with AGGREGATE or UREKLAD 210 with QUARTZ GRANULES to meet finish requirements.

## PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	TYPICAL VALUE
Density	ASTM C905	112 lb./cu. ft. (1.79 g./cc.)
Bond Strength, 7 days @ 77°F (25°C)		Concrete fails
Tensile Strength, 7 days @ 77°F (25°C)	ASTM C307	650 psi. (4.48 MPa)
Compressive Strength, 7 days @ 77°F (25°C)	ASTM C579	2,500 psi. (17.2 MPa)
Flexural Strength, 7 days @ 77°F (25°C)	ASTM C580	1,100 psi. (7.58 MPa)
Flexural Modulus of Elasticity	ASTM C580	2.0 x 10 <sup>4</sup> psi. (138 MPa)
Coefficient of Thermal Exp., in./in./°F (cm./cm./°C)	ASTM C531	4.6 x 10 <sup>-5</sup> (8.3 x 10 <sup>-5</sup> )
Water Absorption	ASTM C413	0.3%
Temperature Resistance Continual Intermittent		160°F (71°C) 180°F (82°C)
Linear Shrinkage	ASTM C531	0.1%
Hardness, Shore A		96
Hardness, Shore D-2		80
Abrasion Resistance, Taber CS-17 wh., 1 kg., 1,000 cyc.	ASTM C501	128 mg. weight loss
Flammability	ASTM D635	Burns--360 sec. Some dripping while burning.
Extent of Burn		3.9" (100 mm.)
Impact Resistance, 1/4" (6.4 mm.) thick, unbonded	Gardner Tester	14 in. lb.
Elongation		10%
Cure Rate @ 77°F (25°C)		4 hours for foot traffic, 12 hours for lt. wheeled traffic, 7 days for max. chemical resistance

## PACKAGING AND COVERAGE

### UREKLAD PRIMER

#### 1-Quart Unit (2 lb. 10 oz. [1.2 kg.]) Consisting of:

One - 1-qt. can of Component A (1 lb. 15 oz. [879 g.]

One - 1-pt. can of Component B (11 oz. [312 g.]

Coverage: Approx. 96 sq. ft. (8.9 m<sup>2</sup>) per unit

#### 1-1/2-Gal. Unit (10 lb. 10 oz. [4.8 kg.]) Consisting of:

One - 1-gal. can of Component A (7 lb. 14 oz. [3.6 kg.]

One - 1/2-gal. can of Component B (2 lb. 12 oz. [1.2 kg.]

Coverage: Approx. 400 sq. ft. (37.2 m<sup>2</sup>) per unit

**UREKLAD LOW ODOR PRIMER****Consists of:**

One - 5-gal. pail of UREKLAD 180 Component A (22 lb. 14 oz. [10.4 kg.])

One - 1-gal. can of UREKLAD 180 Component B (9 lb. 3 oz. [4.2 kg.])

33 lb. (15.0 kg.) ATLAS® AGGREGATE No. 5\* (equal to three one-gallon cans)

Coverage: Approx. 475 sq. ft. (44.2 m<sup>2</sup>) per unit

\*Order separately in 100 lb. (45.4 kg.) bags

**UREKLAD 180****128 lb. 1 oz. (58.1 kg.) Unit Consisting of:**

One - 5-gal. pail of Component A (22 lb. 14 oz. [10.4 kg.])

One - 1-gal. can of Component B (9 lb. 3 oz. [4.2 kg.])

Three - bags of Powder (32 lb. [14.5 kg.]) ea

Coverage: Approx. 100 sq. ft. (9.3 m<sup>2</sup>) per unit @ 1/8" (3.2 mm.) thickness

**UREKLAD CT-80****Consists of:**

One - 5-gal. pail of Component A (23 lb. 12 oz. [2 kg.])

One - 1-gal. can of Component B (9 lb. 8 oz. [4.3 kg.])

33 lb. (15.0 kg.) ATLAS AGGREGATE No. 5\* (equal to three one-gallon cans)

Coverage: Approx. 475 sq. ft. (44.2 m<sup>2</sup>) per unit as non-slip surfacer

\*Order separately in 100 lb. (45.4 kg.) bags

**UREKLAD 210**

One - 1-gal. can (7 lb. 14 oz. [3.6 kg.])

Coverage: Approx. 300 sq. ft. (27.9 m<sup>2</sup>) per unit on smooth surfaces of UREKLAD 180; Approx. 100 sq. ft. (9.3 m<sup>2</sup>) per unit as a seal coat with QUARTZ GRANULES broadcast on the surface of UREKLAD 180

One - 5-gal. pail (39 lb. 6 oz. [17.9 kg.])

Coverage: Approx. 1,500 sq. ft. (139 m<sup>2</sup>) per unit on smooth surfaces of UREKLAD 180; Approx. 500 sq. ft. (46.5 m<sup>2</sup>) per unit as a seal coat with QUARTZ GRANULES broadcast on the surface of UREKLAD 180

**ATLAS AGGREGATE No. 5**

One - bag (100 lb. [45.4 kg.])

Coverage: Approx. 1,350 sq. ft. (125 m<sup>2</sup>) per bag when used in UREKLAD LOW ODOR PRIMER or UREKLAD CT-80; Approx. 400 sq. ft. (37.2 m<sup>2</sup>) per bag broadcasting to excess for a slip-resistant finish

**QUARTZ GRANULES**

One - bag (50 lb. [22.7 kg.])

Coverage: Approx. 200 sq. ft. (18.6 m<sup>2</sup>) per bag per coat

**SURFACE PREPARATION**

Abrasive grit blasting is recommended. Where this

is impractical, chemical preparation is acceptable when sufficient drying time is available. The substrate must be structurally sound, clean and dry.

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

**APPLICATION**

1. Apply UREKLAD PRIMER with a brush or roller and allow to dry.
2. Spread UREKLAD 180 evenly across the surface using a gauge rake, screed or trowel to obtain a thickness of 1/8" (3.2 mm.) to 1/4" (6.4 mm.).
3. After spreading, roll the topping with a spike roller to release entrapped air and allow to self-level.
- 4a. A slip-resistant topcoat is applied after floor is firm enough to support foot traffic. Pour a slurry coat of UREKLAD CT-80 and aggregate onto surface, spread with a steel trowel and back roll to obtain desired finish.
- 4b. Decorative finish - apply UREKLAD 210 and broadcast QUARTZ GRANULES. When dry, vacuum and repeat application of UREKLAD 210 and broadcast another coat of QUARTZ GRANULES. Vacuum and seal with multiple coats of UREKLAD 210.

**LIMITATIONS**

Uncured primer and topping must be protected from moisture. **Where solvent odors from uncured primer may contaminate certain products or be offensive to personnel, use UREKLAD LOW ODOR PRIMER.** For outdoor applications, finish with UREKLAD 210 and QUARTZ GRANULES. Substrate temperature should be between 65°F and 85°F (18°C and 29°C). Do not apply when the relative humidity is 75% or higher.

**MAINTENANCE**

**Cleaning:** Clean with a 10% solution of trisodium phosphate in hot water. DO NOT use sustained steam or high temperature solutions or cleaners that contain solvents.

**Repair:** Should the topping be damaged by severe physical abuse, it can be repaired. Clean and abrade the damaged surface and reapply the UREKLAD 180 SYSTEM.

**PRODUCT SPECIFICATION**

The system shall be UREKLAD 180 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 UREKLAD® 180 (3-301DS)

Acetic Acid, to 5%	E
Acetic Acid, 5% to 10%	G
Acetic Acid, 10% to 50%	C
Acetone	N
Alum or Aluminum Sulfate	E
Ammonium Chloride, Nitrate, Sulfate	E
Ammonium Hydroxide, to 10%	G
Ammonium Hydroxide, 10% to 20%	F
Ammonium Hydroxide, 20% to 30%	N
Aniline	N
Animal Oils	G
Bakery Products	G
Barium Chloride, Sulfate	E
Beer	G
Benzene	N
Benzene Sulfonic Acid, 10%	G
Benzoic Acid	G
Black Liquor	G
Boric Acid	E
Bromine Water	C
Butter	F
Butyl Acetate	N
Butyl Alcohol	N
Butyric Acid	C
Calcium Chloride, Nitrate, Sulfate	E
Calcium Hydroxide	G
Calcium Hypochlorite	C
Carbonated Water	E
Casein	G
Cheese, all	F
Chlorine, Dry	N
Chlorine, Wet	N
Chlorine Water	G
Chloroacetic Acid, to 10%	C
Chloroform	N
Chromic Acid, to 5%	F
Chromic Acid, 5% to 10%	C
Cider	F
Citric Acid, to 10%	G
Citrus Fruits	G
Coffee	G
Copper Chloride, Nitrate, Sulfate	E
Corn Oil	G
Corn Syrup	G
Egg Yolk	C
Ethyl Acetate	N
Ethyl Alcohol	N
Ethyl Ether	N

Ethylene Dichloride	N
Ethylene Glycol	E
Fatty Acids	F
Ferric Chloride, Nitrate, Sulfate	G
Fluosilicic Acid	C
Formaldehyde	F
Formic Acid, 10%	F
Fruit Extracts	G
Fruit Juices	G
Gasoline	N
Glucose	G
Glycerine	G
Grape Juice	F
Horse Radish	G
Hydrobromic Acid, to 20%	G
Hydrochloric Acid, to 20%	G
Hydrochloric Acid, 20% to 37%	C
Hydrofluoric Acid, to 20%	C
Hydrofluoric Acid, 20% to 70%	N
Hydrofluosilicic Acid	C
Hydrogen Peroxide	F
Hypochlorous Acid, to 5%	G
Ice Cream	C
Jams & Jellies	C
Jet Fuel	C
Kerosene	C
Ketchup	F
Lactic Acid, to 5%	G
Lactic Acid, 5% to 10%	F
Lactic Acid, above 10%	C
Lard	F
Linseed Oil	G
Lux Liquid	E
Magnesium Chloride, Nitrate, Sulfate	E
Magnesium Hydroxide	E
Maleic Acid, 25%	G
Malt	F
Malt Liquors	F
Margarine	F
Methyl Alcohol	C
Methyl Ethyl Ketone	N
Methylene Chloride	N
Milk	G
Mineral Oil	G
Mineral Spirits	C
Molasses	G
Muriatic Acid	G
Mustard	G

Nickel Chloride, Nitrate, Sulfate	E
Nitric Acid, to 10%	C
Oleic Acid	G
Olive Oil	G
Oxalic Acid	G
Pectin	E
Perchloroethylene	N
Petroleum	N
Phenol, to 5%	C
Phosphoric Acid, to 25%	G
Phosphoric Acid, above 25%	C
Pickles	G
Picric Acid, to 5%	C
Potassium Bicarbonate, Carbonate	E
Potassium Chloride, Nitrate, Sulfate	E
Potassium Hydroxide, to 25%	E
Potassium Hydroxide, 25% to 50%	F
Salad Oils	G
Salicylic Acid	G
Shortening	F
Silver Nitrate	E
Skydrol	N
Smokehouse Residues	N
Sodium Bicarbonate, Carbonate	E
Sodium Bisulfate, Sulfate	G
Sodium Chloride, Nitrate, Phosphate	E
Sodium Hydroxide, to 25%	E
Sodium Hydroxide, 25% to 50%	G
Sodium Hypochlorite	C
Sodium Sulfide, Sulfite	G
Sodium Thiosulfate	E
Soft Drink Concentrates	C
Soft Drinks	G
Soups	G
Soya Oil	G
Stearic Acid	F
Sugar, Saturated Solution	G
Sulfuric Acid, to 20%	G
Sulfuric Acid, above 20%	C
Sulfurous Acid	G
Syrup	G
Tannic Acid	G
Tartaric Acid	G
Tea	G
Toluene	N
Toluene Sulfonic Acid	C
Tomato Juice	G
Trichloroethylene	N

Trisodium Phosphate	E
Tung Oil	F
Turpentine	G
Urea	E
Urine	E
Vegetable Oil	G
Vinegar	G
Water, Distilled	E
Water, Fresh	E
Water and Sewage	E
Wine	G
Xylene	N
Yeast	G
Zinc Chloride, Nitrate, Sulfate (8-00 <sup>2</sup> )	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 UREKLAD 180 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.