



Atlas Minerals & Chemicals, Inc.



DATA SHEET

4-141PI (5-01²)
Supersedes 4-141PI (3-99)

CHEMPRUF[®] 141

DESCRIPTION

CHEMPRUF 141 is a **novolac vinyl ester** glass flake coating system which may be brush, roller or spray applied. The random layers of glass flake reinforce the coating for resistance to physical stress attributable to thermal cycling. CHEMPRUF 141 provides a durable coating that protects concrete and steel surfaces from corrosion.

The CHEMPRUF 141 is designed for primary or secondary containment applications for tanks, containment dikes, structural steel and floors.

CHEMPRUF 141 may be used as a finisher coating for ChemPruf 1410, ChemPruf 2410 and ChemPruf 2411 Lining Systems or as a membrane in conjunction with chemically resistant brick sheathing.

CHEMICAL RESISTANCE

The CHEMPRUF 141 provides excellent resistance to bleaches, sodium hypochlorite, organic acids and solvents. It's resistant to glacial acetic acid, chromic acid to 20%, nitric acid to 40%, sulfuric acid to 75%, benzene, methyl ethyl ketone and styrene. Refer to the CHEMPRUF 100 SERIES Chemical Resistance Chart, 4-100, for specific information.

ChemPruf 141 is a 20 mil (0.51 mm.) to 50 mil (1.27 mm.) system. The system consists of a ChemPruf VE Primer and a minimum of two coats of ChemPruf 141. The thickness per coat and number of coats applied are based on application method. System thickness, as recommended by ATLAS, is based on service conditions.

CHEMPRUF 141 Consists of:

PRIMER

ChemPruf VE Primer, a two-component, brush, roller or spray applied penetrating primer.

CHEMPRUF 141

ChemPruf 141, a two-component, glass flake filled novolac vinyl ester resin coating.

AVAILABLE COLORS

ChemPruf 141 is available in white and gray.

PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	TYPICAL VALUE
Tensile Strength, 7 days @ 77°F (25°C)	ASTM D638	1,600 psi (11.0 MPa)
Compressive Strength, 7 days @ 77°F (25°C)	ASTM C579	10,200 psi (70.3 MPa)
Flexural Strength, 7 days @ 77°F (25°C)	ASTM C580	3,600 psi (24.8 MPa)
Heat Deflection Temperature	ASTM D648	170°F (46°C)
Temperature Resistance		
Immersion, Continual	—	130°F (54°C)
Immersion, Intermittent	—	160°F (61°C)
Dry Heat	—	275°F (135°C)
Hardness, Shore D-2	—	65 to 70
Cure Rate @ 77°F (25°C)	—	7 days
Max. Chemical Resistance		

ADDITIONAL INFORMATION

For specific information pertaining to Surface Preparation, Packaging or Mixing and Application, refer to the following ATLAS literature:

- Surface Preparation Data Sheet (PS-30)
- Brush or roller applications, refer to Installation Instructions (I-4-141)
- Spray applications, refer to Installation Instructions (I-4-141S).
- Control Joint & Structural Crack Drawing (4-3003DG)
- Horizontal / Vertical Transition Drawing (4-3004DG)
- Pipe Outlets Drawing (4-3005DG)

SURFACE PREPARATION

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: The prepared concrete substrate shall have a minimum tensile strength of 250 psi. (1.72 MPa). Concrete surface must be sufficiently cured and comply with moisture testing as prescribed by ACI Test Method 515 R-16 "Dryness of Surface".

Concrete surfaces should be grit blasted to a finish similar to the profile of 100 to 120 grit sandpaper.

Carbon Steel: Metal surfaces should be grit blasted to a SSPC-SP5 or NACE #1 white metal blast cleaned surface finish. Profile height must be 3 (0.076 mm.) to 4 mils (0.102 mm.).

TEMPERATURE DURING APPLICATION

Store all materials referred to in this Data Sheet at 70°F (21°C) to 80°F (27°C) for 24 hours prior to use.

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.

Minimum temperature for installation is 65°F (18°C). Do not apply when the relative humidity is greater than 75% or the substrate temperature is less than 5°F (3°C) above the dew point.

APPLICATION

1. Brush, roll or spray apply ChemPruf VE Primer.
2. Apply one coat of ChemPruf 141 by brush, roller or sprayer to a WFT of 10 mil (0.25 mm.) to 25 mil (0.64 mm.). Allow to harden.
3. Apply a second and additional coats of ChemPruf 141 as described in Step (2.). More than two coats may be required based on the method of application and system thickness.

Application WFT per Coat

	Horizontal	Vertical
Brush	10 to 20 mils	10 to 20 mils
Roller	10 to 20 mils	8 to 15 mils
Spray	10 to 25 mils	10 to 25 mils

Protect uncured primer and ChemPruf 141 from moisture contamination until minimum cure time is attained.

INSPECTION

1. Inspect ChemPruf 141 for imperfections after the first coat has hardened. Repair defects and imperfections prior to application of successive coats.
2. When specified or required, spark test for pinholes using 100 volts per mil (0.025 mm.) of lining thickness. Spark testing of ChemPruf 141 applied to concrete substrates requires ChemPruf VE Primer with ATLAS[®] Carbon Powder.

MEMBRANE

When the ChemPruf 141 is to be used as a membrane with chemical resistant masonry sheathing, a release agent, such as silicone or paste wax, must be applied to the surface of the lining system. Apply the release agent after the ChemPruf 141 has attained the minimum drying time. The use of a release agent allows the masonry sheathing to move independent of the lining system.

PRODUCT SPECIFICATION

The coating system shall be ChemPruf 141 as manufactured by Atlas Minerals & Chemicals, Inc.

ChemPruf 141, a novolac vinyl ester resin glass flake filled 20 mil (0.51 mm.) to 50 mil (1.27 mm.) coating system. The system consists of a ChemPruf VE Primer and a minimum of two coats of ChemPruf 141. The thickness per coat and number of coats applied are based on application method. System thickness, as recommended by ATLAS, is based on service conditions.

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 Safety Data Sheets and government regulations.

STORAGE AND SHELF LIFE

Store all materials in a cool, dry environment and out of direct sunlight. Store all ChemPruf Resins and Hardeners at a temperature between 40°F (4°C) and 60°F (16°C) and protect from freezing. In unopened original containers, ChemPruf VE Primer Resin and Hardener and ChemPruf 141 Resin and Hardener have a shelf life of approximately three months. ATLAS Carbon Powder can be stored indefinitely.

MAINTENANCE

Should coating be damaged, it can be repaired by thoroughly cleaning and reapplying the ChemPruf 141.

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 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.**



Installation Instructions

Atlas Minerals & Chemicals, Inc.



I-4-141 (10-02²)
Supersedes I-4-141 (5-01)

CHEMPRUF® 141

Instructions for Brush or Roller Application*

*For Spray Application instructions, refer to Data Sheet I-4-141S.

DESCRIPTION

CHEMPRUF 141 system consists of ChemPruf VE Primer and a minimum of two coats of ChemPruf 141. The thickness per coat and number of coats applied are based on application method. System thickness, as recommended by ATLAS, is based on service conditions.

Application WFT per Coat

	Horizontal	Vertical
Brush	10 to 20 mils	10 to 20 mils
Roller	10 to 20 mils	8 to 15 mils

ESTIMATED COVERAGE

CHEMPRUF VE PRIMER

1-Gallon Unit	200 ft ² (18.6 m ²)
5-Gallon Unit.....	1,100 ft ² (102 m ²)

CHEMPRUF VE CONDUCTIVE PRIMER

1-Gallon Unit	120 ft ² (11.1 m ²)
5-Gallon Unit.....	660 ft ² (61.3 m ²)
ATLAS® Carbon Powder*	2,300 ft ² (213.7 m ²)

*Per pail for Conductive Primer

CHEMPRUF 141

1-Gallon Unit	
mil sq. ft. per unit	1,558 ft ² (144 m ²)
10 mils (0.25 mm.).....	155 ft ² (14.4 m ²)
15 mils (0.38 mm.).....	103 ft ² (9.6 m ²)

5-Gallon Unit	
mil sq. ft. per unit	8,151 ft ² (757 m ²)
10 mils (0.25 mm.).....	815 ft ² (75.7 m ²)
15 mils (0.38 mm.).....	543 ft ² (50.4 m ²)

CHEMPRUF VE SMOOTHING LIQUID

1-gallon per 10 gallons of ChemPruf 141

CHEMPRUF FINISHER ADDITIVE*

One - 4 oz. (113 g.) can per 1-gallon unit ChemPruf 141
One - 20 oz. (567 g.) can per 5-gal. unit ChemPruf 141

*Combined with the final coat of ChemPruf 141.

Note: All references to application thickness and coverage per unit in this Installation Instructions are WFT (wet film thickness). Material estimating quantities may vary depending on project conditions and application techniques. Material quantities are theoretical and do not include a safety factor.

PACKAGING

CHEMPRUF VE PRIMER

1-Gal. Unit (8 lb. [3.6 kg.]) Consisting of:

- One - 1-gal. can ChemPruf VE Primer Resin (7 lb. 13 oz. [3.5 kg.])
- One - bottle ChemPruf VE Primer Hardener (2.5 oz. [71 g.])

5-Gal. Unit (43 lb. 14 oz. [19.9 kg.]) Consisting of:

- One - 5-gal. pail ChemPruf VE Primer Resin (43 lb. [19.5 kg.])
- One - bottle ChemPruf VE Primer Hardener (14 oz. [397 g.])

ATLAS CARBON POWDER (for Conductive Primer)

5-gal. pail (38 lb. [17.2 kg.])

CHEMPRUF 141

1-Gal. Unit (9 lb. 8 oz. [4.3 kg.]) Consisting of:

- One - 1-gal. can ChemPruf 141 Resin (9 lb. 6 oz. [4.3 kg.])
- One - bottle ChemPruf 141 Hardener (2.25 oz. [64 g.])

5-Gal. Unit (49 lb. 12 oz. [22.6 kg.]) Consisting of:

- One - 5-gal. pail ChemPruf 141 Resin (49 lb. [22.2 kg.])
- One - bottle ChemPruf 141 Hardener (12 oz. [340 g.])

CHEMPRUF VE SMOOTHING LIQUID

- 1-gal. can (7 lb. 4 oz. [3.3 kg.])
- 5-gal. pail (36 lb. 4 oz. [16.4 kg.])

CHEMPRUF FINISHER ADDITIVE

- 4 oz. [113 g.] can
- 1-qt. can (1 lb. 4 oz. [567 g.])

AVAILABLE COLORS

ChemPruf 141 is available in white and gray.

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.

SURFACE PREPARATION

ChemPruf 141 can be applied to concrete and 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 is recommended. Where impractical, chemical preparation by acid washing is acceptable. A finish similar to the profile of 100 to 120 grit sandpaper is suggested.

The prepared concrete substrate shall have a minimum tensile strength of 250 psi. (1.72 MPa).

Concrete surface must be sufficiently cured and comply with moisture testing as prescribed by ACI Test Method 515 R-16 "Dryness of Surface".

Carbon Steel: Metal surfaces should be grit blasted to a SSPC-SP5 or NACE #1 white metal blast cleaned surface finish. Profile height must be 3 (0.076 mm.) to 4 mils (0.102 mm.).

The primer will hold the finish on carbon steel for approximately two weeks at relative humidity of 75%. Should flash rusting occur at any time before ChemPruf 141 is applied, the surface must be grit blasted again and reprimed.

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

TEMPERATURE / HUMIDITY DURING APPLICATION

Store all materials referred to in this Installation Instructions 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 ChemPruf 141 components are between 65°F (18°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.

Do not apply when the relative humidity is greater than 75% or the substrate temperature is less than 5°F (3°C) above the dew point.

CONSTRUCTION DETAILS

For additional information on Construction Details, refer to the following ATLAS literature:

- Surface Preparation Data Sheet (PS-30)
- Horizontal / Vertical Transition Drawing (4-3004DG)
- Structural Crack Drawing (4-3006DG)
- Control Joint Drawing (4-3003DG)
- Lining System Termination Drawing (4-3000DG)
- Termination at Drain Drawing (4-3001DG)
- Pipe Outlets Drawing (4-3005DG)

Protect uncured primer and ChemPruf 141 from moisture contamination until minimum cure time is attained.

When applying ChemPruf 141 directly to a latex modified concrete substrate, apply a barrier coat of ChemPruf Tie-Coat (4-90PI) before applying ChemPruf VE Primer.

Do not apply the ChemPruf 141 to substrates that flex.

INSTALLATION EQUIPMENT AND SUPPLIES*

- Jiffy type mixer
- 5-gallon (18.9 liter) plastic or metal containers
- Short (3/16" to 1/4") & medium (3/8") nap paint rollers
- Paint brushes
- Rubber & cotton gloves
- Organic respirator, Safety goggles
- Electric grinder

*The safety equipment listed above is the minimum required to install the ChemPruf 141. The installer must provide any equipment necessary to comply with existing federal, state, local and customer safety regulations.

APPLICATION OF THE CHEMPRUF 141 SYSTEM

1. **Primer:** All substrates must be primed with ChemPruf VE Primer. Apply ChemPruf VE Primer with a brush or medium nap roller. Do not allow puddling. Work ChemPruf VE Primer into the pores of concrete substrates.

The primed surface should be tacky or dry before applying ChemPruf 141. 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.

Conductive Primer: When the ChemPruf 141 is applied to concrete substrates, spark testing of the coating may be specified or required. Apply ChemPruf VE Primer with ATLAS Carbon Powder. Stir the mixed components frequently during the application to avoid settlement of the carbon powder. Apply as described above.

CHEMPRUF VE PRIMER

Temperature	Working Time	Minimum Drying Time	Maximum Drying Time
65°F (18°C)	40 min.	8 hours	7 days
75°F (24°C)	30 min.	6 hours	6 days
85°F (29°C)	20 min.	4 hours	5 days

2. Apply a 10 mil (0.25 mm.) to 15 mil (0.38 mm.) WFT coat of ChemPruf 141 with a short nap roller or brush. Allow the ChemPruf 141 to harden before continuing with the next coat.
3. Apply a second coat and any additional coats, as required, of ChemPruf 141 as described in Step (2.). Allow each coat of ChemPruf 141 to harden before applying additional coats. More than two coats may be required based on the method of application and system thickness. If the ChemPruf 141 is allowed to dry for longer than the maximum drying time, the surface must be sanded, cleaned and reprimed before applying the next coat of ChemPruf 141.

CHEMPRUF 141

Temperature	Working Time	Minimum Drying Time	Maximum Drying Time
65°F (18°C)	35 min.	10 hours	72 hours
75°F (24°C)	30 min.	6 hours	72 hours
85°F (29°C)	25 min.	4 hours	36 hours

4. **Inspection:** Inspect the coating for imperfections between each coat of ChemPruf 141. Repair defects and imperfections prior to application of the next coat.

When specified or required, spark test for pinholes using 100 volts per mil (0.025 mm.) of coating thickness. Spark testing of ChemPruf 141 applied to concrete substrates requires ChemPruf VE Primer with ATLAS Carbon Powder.

MEMBRANE

When applying a masonry sheathing over the ChemPruf 141, a release agent must be applied to the surface of the coating system. The use of a release agent allows the masonry sheathing to move independent of the coating system. Silicone or paste wax can be applied after the maximum drying time.

MIXING OF THE CHEMPRUF VE 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.

1-Gallon Unit of ChemPruf VE Primer

The following mixing instructions are for a batch size of 0.9 gallons (3.5 liters). Estimated coverage of the batch size is 200 ft² (18.6 m²). Proportionally increase or decrease component quantities to attain larger or smaller batch sizes.

- Combine the contents of the 7 lb. 13 oz. (3.5 kg.) can of ChemPruf VE Primer Resin with the contents of the 2.5 oz. (71 g.) bottle of ChemPruf VE Primer Hardener.
- Mix thoroughly for two minutes as described above.

5-Gallon Unit of ChemPruf VE Primer

The following mixing instructions are for a batch size of 0.9 gallons (3.5 liters) or 8 lb. (3.6 kg.). Estimated coverage of the batch size is 200 ft² (18.6 m²). Proportionally increase or decrease component quantities to attain larger or smaller batch sizes.

- Combine 116 fluid ounces (3.45 liters) of ChemPruf VE Primer Resin with 2.4 fluid ounces (71 ml.) ChemPruf VE Primer Hardener* in a suitable mixing container.
*2.4 fluid ounces equals 4.7 tablespoons.
- Mix thoroughly for two minutes as described above.

MIX RATIO OF THE CHEMPRUF VE PRIMER

	by Weight	by Volume
ChemPruf VE Primer Resin	100	100
ChemPruf VE Primer Hardener	2	2.1

Conductive Primer

- Mix the ChemPruf VE Primer Resin and Hardener as described above.

- Add 1 lb. 15 oz. (879 g.) or approximately 36 fluid ounces (1.1 liters) of ATLAS Carbon Powder. Mix thoroughly for approximately two minutes. During application, stir the mixed components frequently to avoid settlement of the carbon powder.

MIX RATIO OF THE CONDUCTIVE PRIMER

	by Weight	by Volume
ChemPruf VE Primer Resin	100	100
ChemPruf VE Primer Hardener	2	2.1
ATLAS Carbon Powder	25	31

MIXING OF THE CHEMPRUF 141

Add ChemPruf Finisher Additive to the final coat of ChemPruf 141. Stir the contents of the individual resin and hardener containers prior to blending. Mixing of the components may 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. A maximum of 10%, by volume, of ChemPruf VE Smoothing Liquid may be added.

1-Gallon Unit of ChemPruf 141

The following mixing instructions are for a batch size of 1.07 gallons (4.1 liters). Estimated coverage of the batch size is 155 ft² (14.4 m²) @ 10 mils (0.25 mm.). Proportionally increase or decrease component quantities to attain larger or smaller batch sizes.

Coat(s) without ChemPruf Finisher Additive

- Combine the contents of the 9 lb. 6 oz. (4.3 kg.) can of ChemPruf 141 Resin with 10 fluid ounces (300 ml.) to 12 fluid ounces (360 ml.) of ChemPruf VE Smoothing Liquid in a suitable mixing container. Mix thoroughly for two minutes as described above.
- Add the contents of the 2.25 oz. (64 g.) bottle of ChemPruf 141 Hardener and mix thoroughly for two minutes as described above.

Final Coat with ChemPruf Finisher Additive

- Combine the contents of the 9 lb. 6 oz. (4.3 kg.) can of ChemPruf 141 Resin with 10 fluid ounces (300 ml.) to 12 fluid ounces (360 ml.) of ChemPruf VE Smoothing Liquid in a suitable mixing container. Mix thoroughly for two minutes as described above.
- Add one 4 oz. (113 g.) can of ChemPruf Finisher Additive. Mix thoroughly for two minutes as described above.
- Add the contents of the 2.25 oz. (64 g.) bottle of ChemPruf 141 Hardener and mix thoroughly for two minutes as described above.

5-Gallon Unit of ChemPruf 141

The following mixing instructions are for a batch size of 1.12 gallons (4.2 liters). Estimated coverage of the batch size is 163 ft² (15.1 m²) @ 10 mils (0.25 mm.). Proportionally increase or decrease component quantities to attain larger or smaller batch sizes.

Coat(s) without ChemPruf Finisher Additive

- Combine 128 fluid ounces (3.79 liters) of ChemPruf 141 Resin with 11 fluid ounces (330 ml.) to 13 fluid ounces (390 ml.) of ChemPruf VE Smoothing Liquid in a suitable mixing container. Mix thoroughly for two minutes as described above.
- Add 2.2 fluid ounces (65 ml.) of ChemPruf 141 Hardener* and mix thoroughly for two minutes as described above.
*2.2 fluid ounces equals 4.4 tablespoons.

Final Coat with ChemPruf Finisher Additive

- Combine 128 fluid ounces (3.79 liters) of ChemPruf 141 Resin with 11 fluid ounces (330 ml.) to 13 fluid ounces (390 ml.) of ChemPruf VE Smoothing Liquid in a suitable mixing container. Mix thoroughly for two minutes as described above.
- Add 4.3 fluid ounces (127 ml.) of ChemPruf Finisher Additive* and mix thoroughly for two minutes.
*4.3 fluid ounces equals 8.5 tablespoons.
- Add 2.2 fluid ounces (65 ml.) of ChemPruf 141 Hardener* and mix thoroughly for two minutes as described above.
*2.2 fluid ounces equals 4.4 tablespoons.

MIX RATIO OF THE CHEMPRUF 141

	by Weight	by Volume
ChemPruf 141 Resin	100	100
ChemPruf 141 Hardener	1.5	1.7
ChemPruf VE Smoothing Liquid	7.5	10
ChemPruf Finisher Additive	2.5	3.4

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 Safety Data Sheets and government regulations.

STORAGE AND SHELF LIFE

Store all materials in a cool, dry environment and out of direct sunlight. Store all ChemPruf Resins and Hardeners and ChemPruf VE Smoothing Liquid at a temperature between 40°F (4°C) and 60°F (16°C) and protect from freezing. In unopened original containers, ChemPruf VE Primer Resin and Hardener, ChemPruf 141 Resin and Hardener and ChemPruf VE Smoothing Liquid have a shelf life of approximately five months. ChemPruf Finisher Additive has a shelf life of approximately nine months and ATLAS Carbon Powder can be stored indefinitely.

MAINTENANCE

Should the coating be damaged in any way, it can be repaired by thoroughly cleaning and reapplying

the ChemPruf 141. Mix and apply in accordance with the instructions provided in this Installation Instructions sheet.

- Determine all areas that have been damaged.
- Grind or sand to expose the substrate 1" (25.4 mm.) to 2" (50.8 mm.) beyond the damaged area.
- Grind or sand the surface of the ChemPruf 141. Taper the ChemPruf coating to expose 2" (50.8 mm.) to 4" (101.6 mm.) of each layer of the ChemPruf 141.
- Clean and remove all debris from Step (2.) and Step (3.).
- Apply ChemPruf Tie-Coat, Data Sheet 4-90PI, to the exposed tapered edges of the ChemPruf 141. Allow the ChemPruf Tie-Coat to dry.
- Apply ChemPruf VE Primer to the substrate and exposed tapered edges of the ChemPruf 141.
- Apply the ChemPruf 141. Allow to harden.
- Apply additional coats of ChemPruf 141 as required.

Rezklad® VE-Primer and Atlastacrete® VE Primer are substitutes for ChemPruf VE Primer.

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 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.**



Installation Instructions

Atlas Minerals & Chemicals, Inc.



I-4-141S (10-02²)
Supersedes I-4-141S (5-01)

CHEMPRUF[®] 141

Instructions for **Spray Application*** of ChemPruf VE Primer and ChemPruf 141.

*For Brush or Roller Application instructions, refer to Data Sheet I-4-141.

DESCRIPTION

CHEMPRUF 141 system consists of ChemPruf VE Primer and a minimum of two coats of ChemPruf 141. The thickness per coat and number of coats applied are based on application method. System thickness, as recommended by ATLAS, is based on service conditions.

Application WFT per Coat

	Horizontal	Vertical
Spray	10 to 25 mils	10 to 25 mils

ESTIMATED COVERAGE

CHEMPRUF VE PRIMER

1-Gallon Unit	200 ft ² (18.6 m ²)
5-Gallon Unit	1,100 ft ² (102 m ²)

CHEMPRUF VE CONDUCTIVE PRIMER

1-Gallon Unit	120 ft ² (11.1 m ²)
5-Gallon Unit	660 ft ² (61.3 m ²)
ATLAS [®] Carbon Powder*	2,300 ft ² (213.7 m ²)

*Per pail for Conductive Primer

CHEMPRUF VE PRIMER INHIBITOR

One - 71 gram bottle per gallon of ChemPruf VE Primer

CHEMPRUF 141

1-Gallon Unit	
mil sq. ft. per unit	1,558 ft ² (144 m ²)
10 mils (0.25 mm.)	155 ft ² (14.4 m ²)
15 mils (0.38 mm.)	103 ft ² (9.6 m ²)

5-Gallon Unit	
mil sq. ft. per unit	8,151 ft ² (757 m ²)
10 mils (0.25 mm.)	815 ft ² (75.7 m ²)
15 mils (0.38 mm.)	543 ft ² (50.4 m ²)

CHEMPRUF 141 INHIBITOR

One - 40 gram bottle per gallon of ChemPruf 141

CHEMPRUF FINISHER ADDITIVE*

One - 4 oz. (113 g.) can per 1-gal. unit ChemPruf 141
One - 20 oz. (567 g.) can per 5-gal. unit ChemPruf 141
*Combined with the final coat of ChemPruf 141.

CHEMPRUF VE SMOOTHING LIQUID (Optional)

1-gallon per 10 gallons of ChemPruf 141

Note: All references to application thickness and coverage per unit in this Installation Instructions are WFT (wet film thickness). Material estimating quantities may vary depending on project conditions and application techniques. Material quantities are theoretical and do not include a safety factor.

PACKAGING

CHEMPRUF VE PRIMER

1-Gal. Unit (8 lb. [3.6 kg.]) Consisting of:

One - 1-gal. can ChemPruf VE Primer Resin (7 lb. 13 oz. [3.5 kg.])
One - bottle ChemPruf VE Primer Hardener (2.5 oz. [71 g.])

5-Gal. Unit (43 lb. 14 oz. [19.9 kg.]) Consisting of:

One - 5-gal. pail ChemPruf VE Primer Resin (43 lb. [19.5 kg.])
One - bottle ChemPruf VE Primer Hardener (14 oz. [397 g.])

CHEMPRUF VE PRIMER INHIBITOR

71 gram bottle

ATLAS CARBON POWDER (for Conductive Primer)

5-gal. pail (38 lb. [17.2 kg.])

CHEMPRUF 141

1-Gal. Unit (9 lb. 8 oz. [4.3 kg.]) Consisting of:

One - 1-gal. can ChemPruf 141 Resin (9 lb. 6 oz. [4.3 kg.])
One - bottle ChemPruf 141 Hardener (2.25 oz. [64 g.])

5-Gal. Unit (49 lb. 12 oz. [22.6 kg.]) Consisting of:

One - 5-gal. pail ChemPruf 141 Resin (49 lb. [22.2 kg.])
One - bottle ChemPruf 141 Hardener (12 oz. [340 g.])

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.

CHEMPRUF 141 INHIBITOR

40 gram bottle

CHEMPRUF FINISHER ADDITIVE

4 oz. [113 g.] can

1-qt. can (1 lb. 4 oz. [567 g.]

CHEMPRUF VE SMOOTHING LIQUID

1-gal. can (7 lb. 4 oz. [3.3 kg.]

5-gal. pail (36 lb. 4 oz. [16.4 kg.]

AVAILABLE COLORS**ChemPruf 141** is available in white and gray.**SURFACE PREPARATION**

ChemPruf 141 can be applied to concrete and 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 is recommended. Where impractical, chemical preparation by acid washing is acceptable. A finish similar to the profile of 100 to 120 grit sandpaper is suggested.

The prepared concrete substrate shall have a minimum tensile strength of 250 psi. (1.72 MPa).

Concrete surface must be sufficiently cured and comply with moisture testing as prescribed by ACI Test Method 515 R-16 "Dryness of Surface".

Carbon Steel: Metal surfaces should be grit blasted to a SSPC-SP5 or NACE #1 white metal blast cleaned surface finish. Profile height must be 3 (0.076 mm.) to 4 mils (0.102 mm.).

The primer will hold the finish on carbon steel for approximately two weeks at relative humidity of 75%. Should flash rusting occur at any time before ChemPruf 141 is applied, the surface must be grit blasted again and reprimed.

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

TEMPERATURE / HUMIDITY DURING APPLICATION

Store all materials referred to in this Installation Instructions 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 ChemPruf 141 components are between 65°F (18°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.

Do not apply when the relative humidity is greater than 75% or the substrate temperature is less than 5°F (3°C) above the dew point.

CONSTRUCTION DETAILS

For additional information on Construction Details, refer to the following ATLAS literature:

- Surface Preparation Data Sheet (PS-30)
- Horizontal / Vertical Transition Drawing (4-3004DG)
- Structural Crack Drawing (4-3006DG)
- Control Joint Drawing (4-3003DG)
- Lining System Termination Drawing (4-3000DG)
- Termination at Drain Drawing (4-3001DG)
- Pipe Outlets Drawing (4-3005DG)

Protect uncured primer and ChemPruf 141 from moisture contamination until minimum cure time is attained.

When applying ChemPruf 141 directly to a latex modified concrete substrate, apply a barrier coat of ChemPruf Tie-Coat (4-90PI) before applying ChemPruf VE Primer.

Do not apply the ChemPruf 141 to substrates that flex.

SPRAY EQUIPMENT***Conventional Air Spray with Pressure Pot**

(I.T.W. Binks or equivalent)

- Pressure pot (2-gallon, top outlet)
- Material Line (20 ft. of 1/2" hose with 5 ft. whip section of 3/8" hose at the gun)
- Air Line (25 ft. of 3/8")
- Spray Gun (Binks 95 SL Air Gun)
- Tip (No. 68 SS fluid nozzle with No. 201 air cap)

	VE Primer	141
Pot Pressure	10 psi.	70 psi.
Air Pressure (w/gun triggered)	30 psi.	50 psi.

Airless Spray (I.T.W. Binks or equivalent)

- Material Pump (47 to 1 ratio with teflon packing. Filter must be removed. A 35 to 1 ratio pump could also be used by increasing the air pressure to attain the material pressure.)
- Material Line (25 ft. of 3/8" airless pressure hose with 5 ft. whip section of 1/4" hose at the gun)
- Spray Gun (Binks Airless No. 1 Gun)
- Tip (No. 9-3640); Tips having orifice sizes of 0.026" through 0.036" can be used; Tip angle 40° or less is suggested for spraying ChemPruf 141. Tip having orifice sizes of 0.011 to 0.026 is suggested for spraying ChemPruf VE Primer.
- Air Pressure at pump (75 lb.)
- Material Pressure (3,525 lb.)

INSTALLATION EQUIPMENT AND SUPPLIES*

- MEK (methyl ethyl ketone), for flushing and cleaning spray equipment
- Jiffy type mixer
- 5-gallon (18.9 liter) plastic or metal containers
- Short (3/16" to 1/4") & medium (3/8") nap paint rollers
- Paint brushes
- Rubber & cotton gloves
- Organic respirator, Safety goggles
- Electric grinder

*The safety equipment listed above is the minimum required to install the ChemPruf 141. The installer must provide any equipment necessary to comply with existing federal, state, local and customer safety regulations.

APPLICATION OF THE CHEMPRUF 141 SYSTEM Conventional Air Spray with Pressure Pot:

Suggested pot pressure for ChemPruf VE Primer is 10 psi. and for ChemPruf 141 is 70 psi. Suggested air pressure with gun triggered for ChemPruf VE Primer is 30 psi. and for ChemPruf 141 is 50 psi.

Airless Spray: Removal of the filter from the material pump is suggested for spraying ChemPruf 141.

- Primer:** All substrates must be primed with ChemPruf VE Primer. Spray apply a uniform coat of ChemPruf VE Primer. ChemPruf VE Primer may also be applied with a brush or medium nap roller. Do not allow puddling.

The primed surface should be tacky or dry before applying ChemPruf 141. 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.

Conductive Primer: When the ChemPruf 141 is applied to concrete substrates, spark testing of the coating may be specified or required. Apply ChemPruf VE Primer with ATLAS Carbon Powder. Stir the mixed components frequently during the application to avoid settlement of the carbon powder. Apply ChemPruf VE Primer with ATLAS Carbon Powder with a brush or medium nap roller.

CHEMPRUF VE PRIMER without Inhibitor

Temperature	Working Time	Minimum Drying Time	Maximum Drying Time
65°F (18°C)	40 min.	8 hours	7 days
75°F (24°C)	30 min.	6 hours	6 days
85°F (29°C)	20 min.	4 hours	5 days

CHEMPRUF VE PRIMER with Inhibitor

Temperature	Working Time	Minimum Drying Time	Maximum Drying Time
65°F (18°C)	2.5 hours	8 hours	7 days
75°F (24°C)	2 hours	6 hours	6 days
85°F (29°C)	1 hour	4 hours	5 days

- Spray apply a 10 mil (0.25 mm.) to 25 mil (0.64 mm.) WFT coat of ChemPruf 141. Allow the ChemPruf 141 to harden before continuing with the next coat.
- Apply a second coat and any additional coats, as required, of ChemPruf 141 as described in Step (2.). Allow ChemPruf 141 to harden before continuing with additional coats. More than two coats may be required based on the method of application and system thickness. If the ChemPruf 141 is allowed to dry for longer than the maximum drying time, the surface must be sanded, cleaned and reprimed before applying the next coat of ChemPruf 141.

CHEMPRUF 141 without Inhibitor

Temperature	Working Time	Minimum Drying Time	Maximum Drying Time
65°F (18°C)	35 min.	10 hours	72 hours
75°F (24°C)	30 min.	6 hours	72 hours
85°F (29°C)	25 min.	4 hours	36 hours

CHEMPRUF 141 with Inhibitor

Temperature	Working Time	Minimum Drying Time	Maximum Drying Time
65°F (18°C)	2.5 hours	10 hours	72 hours
75°F (24°C)	2 hours	5.5 hours	72 hours
85°F (29°C)	1 hour	4 hours	36 hours

- Inspection:** Inspect the coating for imperfections between each coat of ChemPruf 141. Repair defects and imperfections prior to application of the next coat.

When specified or required, spark test for pinholes using 100 volts per mil (0.025 mm.) of coating thickness. Spark testing of ChemPruf 141 applied to concrete substrates requires ChemPruf VE Primer with ATLAS Carbon Powder.

MEMBRANE

When applying a masonry sheathing over the ChemPruf 141, a release agent must be applied to the surface of the coating system. The use of a release agent allows the masonry sheathing to move independent of the coating system. Silicone or paste wax can be applied after the maximum drying time.

MIXING OF THE CHEMPRUF VE 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.

ChemPruf VE Primer Inhibitor: ChemPruf VE Primer Inhibitor increases the working time or "pot life" of the mixed ChemPruf VE Primer. ChemPruf VE Primer may be applied without the Inhibitor, however, the working time will be reduced.

1-Gallon Unit of ChemPruf VE Primer

The following mixing instructions are for a batch size of 0.9 gallons (3.5 liters). Estimated coverage of the batch size is 200 ft² (18.6 m²). Proportionally increase or decrease component quantities to attain larger or smaller batch sizes.

- Combine the contents of the 7 lb. 13 oz. (3.5 kg.) can of ChemPruf VE Primer Resin with one 71 gram bottle of ChemPruf VE Primer Inhibitor in a suitable mixing container. Mix thoroughly for two minutes as described above.
- Add the contents of the 2.5 oz. (71 g.) bottle of ChemPruf VE Primer Hardener and mix thoroughly for two minutes as described above.

5-Gallon Unit of ChemPruf VE Primer

The following mixing instructions are for a batch size of 0.9 gallons (3.5 liters) or 8 lb. (3.6 kg.). Estimated coverage of the batch size is 200 ft² (18.6 m²). Proportionally increase or decrease component quantities to attain larger or smaller batch sizes.

- Combine 116 fluid ounces (3.45 liters) of ChemPruf VE Primer Resin with one 71 gram bottle of ChemPruf VE Primer Inhibitor in a suitable mixing container. Mix thoroughly for two minutes as described above.
- Add 2.4 oz. fluid ounces (71 ml.) of ChemPruf VE Primer Hardener* and mix thoroughly for two minutes as described above.

*2.4 fluid ounces equals 4.7 tablespoons.

MIX RATIO OF THE CHEMPRUF VE PRIMER

	by Weight	by Volume
ChemPruf VE Primer Resin	100	100
ChemPruf VE Primer Hardener	2	2.1
ChemPruf VE Primer Inhibitor	2	2.3

Conductive Primer

- Mix the ChemPruf VE Primer Resin and Hardener as described above.
- Add 1 lb. 15 oz. (789 g.) or approximately 36 fluid ounces (1.1 liters) of ATLAS Carbon Powder. Mix thoroughly for approximately two minutes. During application, stir the mixed components frequently to avoid settlement of the carbon powder.

MIX RATIO OF THE CONDUCTIVE PRIMER

	by Weight	by Volume
ChemPruf VE Primer Resin	100	100
ChemPruf VE Primer Hardener	2	2.1
ATLAS Carbon Powder	25	31

MIXING OF THE CHEMPRUF 141

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

Thinning: For spray application, ChemPruf 141 does not require "thinning" when using the suggested or equivalent spray equipment. If adjustment of the viscosity is desired, a maximum of 10%, by volume, of ChemPruf VE Smoothing Liquid may be blended with ChemPruf 141 Resin prior to mixing with ChemPruf 141 Inhibitor and ChemPruf 141 Hardener.

ChemPruf 141 Inhibitor: ChemPruf 141 Inhibitor increases the working time or "pot life" of the mixed ChemPruf 141. ChemPruf 141 may be applied without the Inhibitor, however, the working time will be reduced.

ChemPruf Finisher Additive: Add ChemPruf Finisher Additive to the final coat of ChemPruf 141.

1-Gallon Unit of ChemPruf 141

The following mixing instructions are for a batch size of 0.97 gallons (3.7 liters). Estimated coverage of the batch size is 155 ft² (14.4 m²) @ 10 mils (0.25 mm.). Proportionally increase or decrease component quantities to attain larger or smaller batch sizes.

Coat(s) without ChemPruf Finisher Additive

- Combine the contents of the 9 lb. 6 oz. (4.3 kg.) can of ChemPruf 141 Resin with one 40 gram bottle of ChemPruf 141 Inhibitor in a suitable mixing container. Mix thoroughly for two minutes as described above.
- Add the contents of the 2.25 oz. (64 g.) bottle of ChemPruf 141 Hardener and mix thoroughly for two minutes as described above.

Final Coat with ChemPruf Finisher Additive

- Combine the contents of the 9 lb. 6 oz. (4.3 kg.) can of ChemPruf 141 Resin with one 40 gram bottle of ChemPruf 141 Inhibitor in a suitable mixing container. Mix thoroughly for two minutes as described above.
- Add one 4 oz. (113 g.) can of ChemPruf Finisher Additive. Mix thoroughly for two minutes as described above.
- Add the contents of the 2.25 oz. (64 g.) bottle of ChemPruf 141 Hardener and mix thoroughly for two minutes as described above.

5-Gallon Unit of ChemPruf 141

The following mixing instructions are for a batch size of 1.03 gallons (3.9 liters). Estimated coverage of the batch size is 163 ft² (15.1 m²) @ 10 mils (0.25 mm.). Proportionally increase or decrease component quantities to attain larger or smaller batch sizes.

Coat(s) without ChemPruf Finisher Additive

- Combine 128 fluid ounces (3.79 liters) of ChemPruf 141 Resin with one 40 gram bottle of ChemPruf 141 Inhibitor in a suitable mixing container. Mix thoroughly for two minutes as described above.
- Add 2.2 fluid ounces (65 ml.) of ChemPruf 141 Hardener* and mix thoroughly for two minutes as described above.
*2.2 fluid ounces equals 4.4 tablespoons.

Final Coat with ChemPruf Finisher Additive

- Combine 128 fluid ounces (3.79 liters) of ChemPruf 141 Resin with one 40 gram bottle of ChemPruf 141 Inhibitor in a suitable mixing container. Mix thoroughly for two minutes as described above.
- Add 4.3 fluid ounces (127 ml.) of ChemPruf Finisher Additive* and mix thoroughly for two minutes.
*4.3 fluid ounces equals 8.5 tablespoons.

- c. Add 2.2 fluid ounces (65 ml.) of ChemPruf 141 Hardener* and mix thoroughly for two minutes as described above.

*2.2 fluid ounces equals 4.4 tablespoons.

MIX RATIO OF THE CHEMPRUF 141

	by Weight	by Volume
ChemPruf 141 Resin	100	100
ChemPruf 141 Hardener	1.5	1.7
ChemPruf 141 Inhibitor	0.9	1.2
ChemPruf Finisher Additive	2.5	3.4

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. Methyl ethyl ketone 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 Safety Data Sheets and government regulations.

STORAGE AND SHELF LIFE

Store all materials in a cool, dry environment and out of direct sunlight. Store all ChemPruf Resins and Hardeners and ChemPruf VE Smoothing Liquid at a temperature between 40°F (4°C) and 60°F (16°C) and protect from freezing. In unopened original containers, ChemPruf VE Primer Resin and Hardener, ChemPruf 141 Resin and Hardener and ChemPruf VE Smoothing Liquid have a shelf life of approximately five months. ChemPruf Finisher Additive and ChemPruf Inhibitors have a shelf life of approximately nine months. ATLAS Carbon Powder can be stored indefinitely.

MAINTENANCE

Should the coating be damaged in any way, it can be repaired by thoroughly cleaning and reapplying the ChemPruf 141. Mix and apply in accordance with the instructions provided in this Installation Instructions sheet.

1. Determine all areas that have been damaged.
2. Grind or sand to expose the substrate 1" (25.4 mm.) to 2" (50.8 mm.) beyond the damaged area.
3. Grind or sand the surface of the ChemPruf 141. Taper the ChemPruf coating to expose 2" (50.8 mm.) to 4" (101.6 mm.) of each layer of the ChemPruf 141.
4. Clean and remove all debris from Step (2.) and Step (3.).
5. Apply ChemPruf Tie-Coat, Data Sheet 4-90PI, to the exposed tapered edges of the ChemPruf 141. Allow the ChemPruf Tie-Coat to dry.
6. Apply ChemPruf VE Primer to the substrate and exposed tapered edges of the ChemPruf 141.
7. Apply the ChemPruf 141. Allow to harden.

8. Apply additional coats of ChemPruf 141 as required.

Rezklad® VE-Primer and Atlastacrete® VE Primer are substitutes for ChemPruf VE Primer.

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 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.**