



Atlas Minerals & Chemicals, Inc.



DATA SHEET

4-142PI (10-05)

CHEMPRUF 142

DESCRIPTION

CHEMPRUF 142 is a **epoxy 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 142 provides a durable coating that protects concrete and steel surfaces from corrosion.

The CHEMPRUF 142 is designed for primary or secondary containment applications for tanks, containment dikes, structural steel and floors. CHEMPRUF 142 may be used as a finisher coating for CHEMPRUF 1420, CHEMPRUF 2420 and CHEMPRUF 2421 Lining Systems or as a membrane in conjunction with chemically resistant brick sheathing.

CHEMICAL RESISTANCE

CHEMPRUF 142 is resistant to chlorine dioxide, wet chlorine and sodium hypochlorite, organic acids, fats, oils, cleaners and disinfectants. It also resists many oxidizing and non-oxidizing acids, alkalies, salts and solvents. Refer to the CHEMPRUF 100 SERIES Chemical Resistance Chart, 4-100, for specific information.

CHEMPRUF 142 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 142. 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 142 Consists of:

PRIMER

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

CHEMPRUF 142

CHEMPRUF 142, a two-component, glass flake filled epoxy vinyl ester resin coating.

AVAILABLE COLORS

CHEMPRUF 142 is available in white and gray.

ADDITIONAL INFORMATION

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

PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	TYPICAL VALUE
Tensile Strength, 7 days @ 77°F (25°C)	ASTM D638	1,700 psi. (11.7 MPa)
Compressive Strength, 7 days @ 77°F (25°C)	ASTM C579	9,900 psi. (68.3 MPa)
Flexural Strength, 7 days @ 77°F (25°C)	ASTM C580	3,200 psi. (22.1 MPa)
Heat Deflection Temperature	ASTM D648	151°F (66°C)
Temperature Resistance		
Immersion Continual, °F (°C)		130°F (54°C)
Immersion Intermittent, °F (°C)		150°F (66°C)
Dry Heat, °F (°C)		250°F (121°C)
Hardness, Shore D-2		65 to 70
Cure Rate @ 77°F (25°C), Max. Chemical Resistance		7 days

- Surface Preparation Data Sheet (PS-30)
- Brush or roller applications, refer to Installation Instructions (I-4-142)
- Spray applications, refer to Installation Instructions (I-4-142S).
- 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. 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 142 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 142 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 142 from moisture contamination until minimum cure time is attained.

INSPECTION

1. Inspect CHEMPRUF 142 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 142 applied to concrete substrates requires CHEMPRUF VE Primer with ATLAS® Carbon Powder.

MEMBRANE

When the CHEMPRUF 142 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 142 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 142 as manufactured by Atlas Minerals & Chemicals, Inc. **CHEMPRUF 142**, a epoxy 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 142. 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 Material 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 142 Resin and Hardener have a shelf life of approximately six months. ATLAS Carbon Powder can be stored indefinitely.

MAINTENANCE

Should coating be damaged, it can be repaired by thoroughly cleaning and reapplying the CHEMPRUF 142.

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.**

Note: Atlas makes it a practice to continuously update and enhance our CCM (Corrosion Resistant Construction Materials) products. This may result in slight discrepancies between our printed Data Sheets and the current version. For the most recent version of any Data Sheet, please visit our Web site at www.atlasmin.com