



## CHEMPRUF 2101 Membrane System CHEMPRUF 2102 Membrane System

### DESCRIPTION

CHEMPRUF 2101 and CHEMPRUF 2102 Membrane Systems are fiberglass reinforced furfuryl alcohol resin membrane systems. The systems are a composite of a **furfuryl alcohol** resin, inert carbon fillers and fabric reinforcement. The membranes are designed to be used with a chemical resistant brick masonry sheathing providing a strong durable membrane to protect steel and concrete from corrosive attack. Both systems are resistant to a broad range of acids, alkalies and solvents. The CHEMPRUF 2102 Membrane is recommended for concrete surfaces. CHEMPRUF 2101 Membrane can be applied to concrete and carbon steel substrates.

### CHEMICAL RESISTANCE

CHEMPRUF 2101 and CHEMPRUF 2102 Membrane Systems are resistant to a broad range of nonoxidizing acids, alkalies, salt solutions and organic solvents including toluene, xylene and ethylene dichloride. Refer to the CHEMPRUF 2000 Series Chemical Resistance Chart, 4-2000, for specific information.

**ChemPruf 2101** is an elastomeric base and a carbon filled basecoat and topcoat with an intermediate layer of fiberglass reinforcement system.

**ChemPruf 2102** is a carbon filled basecoat and topcoat with an intermediate layer of fiberglass reinforcement system.

### CHEMPRUF 2101 - Elastomeric Base

**Atlatic® CT-30 Primer**, a one-component, brush or roller applied primer.

**Atlatic CT-30**, a trowel applied two-component urethane asphalt.

### CHEMPRUF 2102 - Primer

**ChemPruf F Primer**, a one-component, brush or roller applied primer.

### CHEMPRUF 2101 & CHEMPRUF 2102 BASECOAT / TOPCOAT

**Carbo-Alkor® Mortar**, a furan resin, carbon filled basecoat and topcoat, each trowel coat applied at a nominal thickness of 1/16" (1.6 mm.).

### PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	TYPICAL VALUE 2101 & 2102
Density, Composite	ASTM C905	100 lb./cu. ft. (1.60 g./cc.)
Tensile Strength, Composite 7 days @ 77°F (25°C)	ASTM D638	2,000 psi. (13.8 MPa)
Compressive Strength, Mortar 7 days @ 77°F (25°C)	ASTM C579	5,200 psi. (35.9 MPa)
Flexural Strength, Composite 7 days @ 77°F (25°C)	ASTM C580	4,600 psi. (31.7 MPa)
Coefficient of Thermal Expansion, Composite in./in./°F (cm./cm./°C)	ASTM C531	1.25 x 10 <sup>-5</sup> (2.25 x 10 <sup>-5</sup> )
Temp. Resistance, Composite Dry Heat, °F (°C)		350°F (177°C)
Hardness, Barcol		50-60
Cure Rate @ 77°F (25°C)		7 days

### REINFORCING FABRIC

**ChemPruf 10 oz. Reinforcing Fabric**, 10 oz./sq. yd. (339 g./m<sup>2</sup>) woven fiberglass reinforcing fabric for use with ChemPruf 2101 or ChemPruf 2102 Membrane Systems.

### SMOOTHING LIQUID

**ChemPruf E Smoothing Liquid**, a one-component, roller applied material used to smooth the basecoat and topcoat surfaces.

### AVAILABLE COLORS

**ChemPruf 2101 & ChemPruf 2102 Membrane Systems** are available in black only.

### 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)
- ChemPruf 2101 Membrane System Installation Instructions (I-4-2101)
- ChemPruf 2102 Membrane System Installation Instructions (I-4-2102)
- Lining System Termination Drawing (4-3000DG)
- Termination at Drain Drawing (4-3001DG)
- 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. Cracks in the concrete substrate 1/16" (1.6 mm.) wide or greater must be opened to a minimum 1/4" (6.4 cm.) cleaned, and filled.

**Carbon steel:** Carbon steel 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.).

Should flash rusting occur at any time before ChemPruf 2101 elastomeric base is applied, the surface must be grit blasted again and reprimed.

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

## 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 60°F (16°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 OF CHEMPRUF 2101

1. Trowel apply a 30 mil (0.8 mm.) coat of Atlastic CT-30 Membrane.
2. Trowel apply a 1/16" (1.6 mm.) WFT basecoat of Carbo-Alkor Mortar. Imbed the ChemPruf Reinforcing Fabric and roll into the wet basecoat. Allow basecoat to harden.
3. Trowel apply a 1/16" (1.6 mm.) WFT topcoat of Carbo-Alkor Mortar. Smooth with a short nap roller lightly wetted with ChemPruf E Smoothing Liquid. Allow to harden.

## APPLICATION OF CHEMPRUF 2102

1. Apply ChemPruf F Primer with a brush or roller.
2. Trowel apply a 1/16" (1.6 mm.) WFT basecoat of Carbo-Alkor Mortar. Imbed the ChemPruf Reinforcing Fabric and roll into the wet basecoat. Allow basecoat to harden.
3. Trowel apply a 1/16" (1.6 mm.) WFT topcoat of Carbo-Alkor Mortar. Smooth with a short nap roller lightly wetted with ChemPruf E Smoothing Liquid. Allow to harden.

Protect uncured primer, elastomeric base, basecoat and topcoat from moisture contamination until minimum cure time is attained.

## INSPECTION

Inspect lining for imperfections after basecoat and fabric. Repair defects and imperfections prior to application of the topcoat.

## RELEASE AGENT

ChemPruf 2101 and ChemPruf 2102 Membrane Systems are to be used as a membrane with chemical resistant masonry sheathing. Before applying the masonry sheathing, a release agent, such as silicone or paste wax, must be applied to the surface of the membrane system. Apply the release agent after the ChemPruf 2101 or ChemPruf 2102 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 membrane system, as manufactured by Atlas Minerals & Chemicals, Inc. shall be:

**ChemPruf 2101 Membrane System**, a furfuryl alcohol (furan) resin membrane system. The membrane system shall consist of a 30 mil elastomeric urethane asphalt base, carbon filled basecoat and topcoat, each trowel applied at a nominal thickness of 1/16" (1.6 mm.), with an intermediate layer of 10 oz./yd<sup>2</sup> (339 g./m<sup>2</sup>) fiberglass fabric reinforcement.

**ChemPruf 2102 Membrane System**, a furfuryl alcohol (furan) resin membrane system. The membrane system shall consist of a carbon filled basecoat and topcoat, each trowel applied at a nominal thickness of 1/16" (1.6 mm.), with an intermediate layer of 10 oz./yd<sup>2</sup> (339 g./m<sup>2</sup>) fiberglass fabric reinforcement.

## CLEANING OF TOOLS AND EQUIPMENT

Solvents, such as methyl ethyl ketone, toluene or xylene, will remove the materials referred to in this Data Sheet from mixing tools and equipment if cleaning is done immediately after use. 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 and temperatures above 86°F (30°C). Protect from freezing. In unopened original containers, Atlastic CT-30 Primer, Atlastic CT-30 Component A and B, ChemPruf F Primer and Carbo-Alkor Mortar Resin and Powder have a shelf life of approximately one year. ChemPruf E Smoothing Liquid, ChemPruf 8.5 oz. Fabric Tape and ChemPruf 10 oz. Reinforcing Fabric can be stored indefinitely.

**MAINTENANCE**

Should the membrane be damaged in any way, it can be repaired by thoroughly cleaning and reapplying the ChemPruf 2101 or ChemPruf 2102 Membrane System.

**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.**