



Chemical® Corporation

GripSeal® Aliphatic Polyurethane

Technical Data Sheet

PRODUCT DESCRIPTION

Freedom Chemical® Corporation's *GripSeal®* is a two-component hand applied aliphatic polyurethane, used as a protective or waterproof coating with superior chemical and abrasion resistance designed for pedestrian, vehicular, commercial, industrial and manufacturing atmospheres. *GripSeal®* is used in horizontal applications on concrete, wood and metal surfaces. Its quick gel and set time is convenient and allows for application to proceed while air and substrate temperatures are between 32° F (0° C) and 104° F (40° C).

ADVANTAGES

- ✦ Complies with VOC and SCAQMD requirements
- ✦ Excellent abrasion and chemical resistance
- ✦ Low temperature applications
- ✦ High gloss, light reflectivity
- ✦ Meets USDA criteria
- ✦ No noxious odors
- ✦ Open to pedestrian traffic in 4 hours and vehicular the next day at 75° Fahrenheit (23.88° C) and 50% Relative Humidity

RECOMMENDED USES

- ✦ Aircraft Hangers
- ✦ Loading Docks
- ✦ Mechanical Rooms
- ✦ Parking Structures
- ✦ Production Areas
- ✦ Show Room Floors
- ✦ Transportation
- ✦ Warehouse Floors

SURFACE PREPARATION

Surface preparation is the essential first stage treatment of a substrate before the application of any coating. The performance of a coating is significantly influenced by its ability to adhere properly to the substrate material. It is generally well established that correct surface preparation is the most important factor affecting the total success of surface treatment. The presence of even small amounts of surface contaminants, oil, grease, oxides etc. can physically impair and prevent coating adhesion to the substrate.

Be sure that surfaces are clean, dry, and sound and given sufficient profile to obtain adequate product adhesion.

Remove all dust, efflorescence, laitance, salts, curing compounds, dirt, oil, form release agents, and other foreign matter.

Perform an adhesion test prior to starting any coating project.

Concrete should be cured for a minimum of 28 days prior to product application and have at least 3000 psi compressive and 220 psi tensile strength.

ASTM D 4258-Standard practice for cleaning concrete.
ASTM D 4259-Standard practice for abrading concrete.

ASTM D 4260-Standard practice for etching concrete.
ASTM F 1869-10-Standard test method for measuring moisture vapor emission rate of concrete.
ASTM F 710-08-Standard for preparing concrete floors to receive resilient flooring, section 5.3 ph.
ASTM F 2170-09-Standard test method for determining relative humidity in concrete floor slabs using situ probes.
ICRI 03732: CSP 3-5-Concrete surface preparation.
SSPC-SP 13/NACE No. 6, Surface Preparation of Concrete.

COLOR

Clear, Grey and Tan – Add color to part-B only.

GripSeal® is UV stable.

PACKAGING

Pigmented: 1.375 gallon kit (1 gallon/3.785 liters) part-A isocyanate and (.35 gallons/1.324 liters) part-B resin.

Pigmented: 2¼ gallon kit (2 gallons/7.570 liters) part-A isocyanate and (¾ gallons/2.839 liters) part-B resin.

Clear: 1.25 gallon kit (1 gallon/3.785 liters) part-A isocyanate and (.25 gallons/.9463 liters) part-B resin.

Clear: 2½ gallon kit (2 gallons/7.570 liters) part-A isocyanate and (½ gallons/1.892 liters) part-B resin.

MIXING/PRIMER/COVERAGE/APPLICATION

Mix entire/full package containers of multi-component materials. Do not measure nor mix partial containers of multi-component materials.

Do not dilute *GripSeal®* under any circumstances.

Material, substrate and application temperature should be between 65° F-90° F (18° C - 32.22° C) and at least 6° (-14.44° C) above the dew point and rising, relative humidity (RH) should be limited to 30–80%.

Mix primer part-A and part-B (a minimum of 2 minutes is recommended) and apply it to the surface (coverage rates are approximate and may vary based on the roughness/porosity of the concrete and may require more than one coat of primer) with FT-6160, FT-6160-FS, FT-6100-MT for concrete and MT-6175 for metal only, at a rate of 1 gallon (3.78 liters) per 300 square feet (27.8709 m²). Apply with a squeegee, brush, phenolic core roller or spray.

GripSeal® part-A and part-B should be mixed individually prior to combining, add part-A to part-B while mixing, using a mechanical mixer at medium speed making sure not to encapsulate any air. Mix until a homogeneous mixture and color is obtained (a minimum of 4 minutes is recommended).

Apply 1 gallon (3.785 liters) of *GripSeal®* an aliphatic topcoat at 200 to 400 square feet per gallon (18.5806m² - 37.1612m²)

to achieve a desired color at a theoretical dry film thickness of 3.6 mils (91.44 microns) using a ¼" nap mohair roller with a phenolic resin core or flat edge squeegee and then back roll.

GripSeal® should be applied in a smooth pattern to establish uniform thickness and appearance.

When *GripSeal®* is used as a topcoat over *StoneGrip®* it must be applied within twenty four (24) hours of the application of the *StoneGrip®*.

Recoating GripSeal® prep the surface and prime with FT-6160, broadcast an aggregate if required and apply one or more coats of *GripSeal®*.

EQUIPMENT CLEAN UP

Immediately clean equipment with an environmentally safe solvent, as permitted by local regulations. Cured or dried material may be removed by mechanical means.

SPECIFICATION AND FIELD ASSISTANCE

Contact Freedom Chemical Corporation for specification assistance.

Jobsite visits by Freedom Chemical Corporations employees or its independent agents are solely for the purpose of determining qualification for warranty.

STORAGE

GripSeal® has a shelf life of 1 year shelf life from the date of manufacture, in factory-sealed containers.

Storage temperature for part-A and part-B is between 65° F - 90° F (18° C - 32.22° C) at or below 50% Relative Humidity, avoiding freezing temperatures.

Never store directly on concrete surface, always store on pallets.

Keep containers sealed tightly to eliminate any condensation, moisture, or water contamination in part-A or part-B.

LIMITATIONS

The end user should check the suitability of this product prior to its application.

Excess moisture vapor in concrete slabs may result in primer and/or coating to delaminate, discolor or cause improper curing.

Do not open until ready to use.

Freedom Chemical assumes no liability for substrate defects.

Substrates that have previously been coated are subject to absorption, which may affect the adhesion of a new coating.

High temperatures and humidity can significantly affect pot life and the cure time.

Low temperatures and humidity can extend the cure time.

WARNING

GripSeal® contains Isocyanates.

TECHNICAL DATA

| | |
|--|------------------------------|
| MIX RATIO BY VOLUME PIGMENTED..... | 1A:0.375B |
| MIX RATIO BY VOLUME CLEAR | 1A:4B |
| MIXED VISCOSITY AT 72°F (22° C) 50% RELATIVE HUMIDITY..... | 400 CPS |
| SHORE HARDNESS, ASTM D-3363..... | 3 H |
| TENSILE STRENGTH, ASTM D-412..... | 9000 PSI |
| ELONGATION, ASTM D-412 | .8% |
| ABRASION RESISTANCE TABOR CS-17, MG LOSS/1000 CYCLES... | 18 MG |
| COEFFICIENT OF FRICTION-COF JAMES TEST ASTM D-2047..... | 0.55 |
| IMPACT ASTM D-2794..... | 140 IN. LBS DIRECT & REVERSE |
| FLASH POINT..... | 187° F (86° C) |
| TACK FREE TIME ASTM D-5895 72° F (22° C) | 1 - 2 HOURS |
| RETURN TO SERVICE | 12 HOURS |
| TOTAL SOLIDS BY VOLUME, ASTM D-2369 (MIXED)..... | 90% |
| VOLATILE ORGANIC COMPOUNDS ASTM D-3960..... | <100 GM/LITER |

THE END USER SHOULD CHECK THE SUITABILITY OF THIS PRODUCT PRIOR TO ITS USE.

CHEMICAL RESISTANCE ASTM D-1308 AND ASTM D-543-95 7 DAY IMMERSION @ 77° F (25° C)

R - RECOMMENDED

C - CAUTION (SHORT TERM EXPOSURE)

| | |
|----------------------------|--------------------------|
| 10% TSP - R | HYDROCHLORIC 10% - C |
| 20% AMMONIUM NITRATE - R | ISOPROPANOL - C |
| 20% SODIUM CHLORIDE - R | JET FUEL - R |
| ACETIC ACID 10% - C | MEK - C |
| AMMONIUM HYDROXIDE 10% - R | MINERAL SPRITS - R |
| BLEACH - R | MOTOR OIL - R |
| BRAKE FLUID - R | OLEIC - R |
| CITRIC ACID 10% - C | PMA - C |
| D-LIMONENE - R | SKYDROL 500B - R |
| EDTHYLENE GLYCOL - C | SKYDROL LD4 - R |
| GASOLINE - R | SODIUM HYDROXIDE 50% - R |

Incredible Stuff, Friendly People and Exceptional Service™

LIMITED WARRANTY: Read all information in the product data sheets, and material safety data sheets (MSDS) before applying material. Product information and instructions are subject to change without notice. Contact your Freedom Chemical Corporation agent or visit our website for current product information and instructions. Products manufactured by Freedom Chemical Corporation are free of defects and will meet Freedom Chemical Corporations current published physical properties. There are no other warranties given by Freedom Chemical Corporation of any kind implied, or expressed, including any warranty of fitness for a particular purpose, and/or merchantability in connection with this product.

DISCLAIMER: The data and information contained herein doesn't create a material or sales specification. The information contained in this data sheet does not guarantee that any hazards listed herein are the only one(s) which may occur. Product and application instructions are provided for the purpose of establishing a general profile and that they will meet Freedom Chemical Corporations current published physical properties. Freedom Chemical Corporation makes no claim as to the accuracy of the information, but every effort has been made to ensure the accuracy of information contained in the Technical Datasheet. Reproduction of the information in this document, either as a whole or in part, is forbidden unless written permission has been obtained from Freedom Chemical Corporation.

12026 CENTRALIA ROAD, SUITE C, HAWAIIAN GARDENS, CA 90716 • (562) 343-9697 • FAX (562) 343-9327
GEORGIA • (678) 259-9283 • www.freedomchemicalusa.com • © OCTOBER 2011 FREEDOM® CHEMICAL CORPORATION