SPI COATINGS

PROVEN PERFORMANCE • REAL WORLD SOLUTIONS

INSULATION AND CORROSION SPECIALISTS

MOIST METAL GRIP

Technical Data Sheet (06/24/20)

DESCRIPTION

MOIST METAL GRIP is a two-part epoxy coating system that has been specifically designed with specific additives to promote adhesion when used on metal. MOIST METAL GRIP was developed to be applied to metal surfaces that cannot be dry enough to use RUST GRIP®. It can be used directly to wet or damp metal surfaces and maintain excellent adhesion to prevent further surface corrosion. It is a water repelling epoxy for use under water or in areas where constant splashing or condensation is a problem. It is resistant to chemicals and solvents, and is designed to be applied directly to concrete, masonry and wood.

TYPICAL USES

- As a one-coating system for metal that is moist or in high humidity.
- As a one-coating system to encapsulate existing rusted surfaces.
- As a one-coating system to protect metal with condensation issues.
- As a one-coating system to line tanks.
- Very good acid and good alkali resistance
- As a primer before ENAMO GRIP or LINING KOTE is applied.

APPLICATION METHODS

MOIST METAL GRIP can be applied to metal, as well as concrete or masonry substrates. The coating can be applied by spray, brush or roller. For specific instructions on surface preparation, mixing and application, please refer to the SPI's application instructions for MOIST METAL GRIP.

NOTE: This product must not be applied on or within 2 inches of chlorinated rubber.

NOTE: Never use mineral spirits to prep surfaces or for thinning.

NOTE: As MOIST METAL GRIP can be applied on a 100% WET SURFACE, there is no need to watch for the Delta-T of 5°F (3°C) safe margin above the dew point and the surface temperature. However, the cooler the surface and ambient temperatures, the longer the dry and cure time. This must be considered before applying, so consult with the manufacturer.

TEST AND CERTIFICATIONS

1. USDA approved
2. ASTM B117 – Salt spray corrosion test
3. ASTM D1654 – 450 hour evaluation over black steel
4. Marine Approvals for salt water/maritime use
5. US Coast Guard
6. ABS (American Bureau of Shipping)
7. IMO (International Marine Organization)
8. Adhesion: ASTM class 5B – no film pull off
9. UV and Salt Spray Resistance (ASTM 5894): 5,000 hours
10. Potable water and foodstuff (European)
11. Meets requirements of SSPC Paint 42 (min.)

FIELD TEST HAVE PROVEN:

1. The coating has outstanding adhesion
2. The coating is resistant to solvents and chemical splashes
3. The coating is flexible, yet resistant to impact

MINIMUM SPREAD RATES (mil thickness)

All Surfaces – Apply 2-3 applications of MOIST METAL GRIP @ 200 sq. ft./gallon; (18 sqmtr/gallon); 8 mils wet/4 mils dry (200 microns wet / 100 dry) each coat. This will leave a total thickness of 8-12 dry mils (200-300 microns dry)

NOTE: Surface and ambient temperatures will determine cure-time. Introduction of heat beneath or over surface will enhance the cure time.

Induction Period: 30 minutes at 70°F (21°C).

SPECIAL NOTE: Induction time can span from 5 minutes to one hour according to whether it is applied to a horizontal or vertical surface, and according to ambient temperatures (see Application Instructions).

PHYSICAL DATA

- Reacted Solids: By weight - 67% / By volume - 51%
- 30-60 MINUTES TO TACK FREE AT 70°F (21°C)
- Overcoat window is three hours or less at 70°F (21°C)
- Lead and chromate free
- Cures by chemical reaction; 3 days to touch, 10 full days to cure in 70°F (21°C)
- Reacted Weight: 11.15 lbs. per gallon
- Amine-epoxy
- Shelf Life: Up to 3 years (unopened) under appropriate storage condition (see MSDS)
- Mix Ratio; 4-part base to 1-part curing agent by volume
- Reactive VOC - White: 1.32 lbs./gal; 158 grams per liter
- Tinting: Can be tinted any color with a minimum of 250 gallons
- Resistant to mild concentrations of solvents, chemicals and acids
- Maximum Surface Temp when applying; 150°F (65°C) Minimum Surface Temp when applying; 48°F (9°C)
- Maximum Surface Temp after curing; 325°F (163°C)
- Failure will occur at a constant temperature equal to or greater than 300°F (149°C); consult SPI for intermittent temperatures greater than 325°F (163°C)
- Viscosity: 90 seconds, #4 ford cup @ 74°F
- Non-sparking coating film

SAFETY PRECAUTIONS

Do not use this product without first taking all appropriate safety measures to prevent property damage and injuries. These measures may include, without limitation: proper ventilation, use of proper lamps, wearing of protective clothing and masks, tenting, and proper separation of application areas.

This coating is flammable. Keep away from fire, or other sources of ignition. For more specific safety procedures, please refer to the MOIST METAL GRIP Safety Data Sheet. **KEEP OUT OF REACH OF CHILDREN.**

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MOIST METAL GRIP

Application Instructions (10/12/16)

MOIST METAL GRIP is a two-part epoxy coating system that has been specifically designed with specific additives to promote adhesion when used on metal. MOIST METAL GRIP was developed to be applied to metal surfaces that cannot be dry enough to use RUST GRIP®. It can be used directly to wet or damp metal surfaces and maintain excellent adhesion to prevent further surface corrosion. It is a water repelling epoxy for use under water or in areas where constant splashing or condensation is a problem. It is resistant to chemicals and solvents, and is designed to can be applied directly to concrete, masonry and wood.

SURFACE PREPARATION

Surface must be clean from oil, tar, rust, grease, salts, and films.

1) Follow SP6 or SP7 guidelines.
2) Clean surface using TSP (tri-sodium-phosphate) or a citrus cleaner to release dirt and degreaser residue.
3) Pressure-wash if possible @ 3500 psi.
4) Salt contamination on a surface can come as a result of salt water, fertilizers, and car exhaust. Use Chlor*Rid or equivalent to decontaminate surface, if salts are present. Acceptable levels: Nitrates: 5-10 mcg/cm², Sulfates: 5-10 mcg/cm², Chlorides: 3-5 mcg/cm².

Surface may be damp.

1) MOIST METAL GRIP must be applied during proper temperatures (below), and at the prescribed overcoat window of the coating over which it will be applied.
2) If applied over an existing coating having a glossed or shiny finish, it must be sanded and roughed to remove gloss before application--to improve the profile.
3) Additional coats of MOIST METAL GRIP can only be applied when the 1st coat becomes tacky to the touch and has little-to-no transfer of coating. If the first coat is allowed to cure more than 3 days to where it is no longer tacky, the surface must be lightly sanded to make it rough before the second coat is applied.

MIXING

1) Open pail, mix base with curing agent (4 parts base : 1 part curing agent); ratio by volume, not by weight
2) Mix by hand for two minutes, or use a drill and mixing blade for a minimum of 30 seconds with NO vortex.

TEMPERATURE

1) Apply between 40°F (4°C) and 150°F (65°C).
2) Maximum temperature for continuous use when cured is 300°F (149°C).
3) Store unmixed product between 40°F (4°C) and 100°F (38°C) according to hazmat standards on MSDS.
4) Mix base and curing agent and use immediately if ambient temperature is above 70°F (21°C). If below 70°F (21°C), allow mixed product to stand for 30 minutes before using.
5) Vertical surfaces: allow extra conduction time (base added to cure), up to one hour before use to allow the coating to thicken for better hang without sag.

POT LIFE

4-6 hours at 70°F (21°C) on horizontal surfaces. Shorter pot life may occur as temperature increases according to climate/ambient conditions.

APPLICATION

MOIST METAL GRIP can be applied by brush, roller or spray; however, the preferred method is by air or airless sprayer.

1) If application is by brush, use a soft bristle brush.
2) If application is by roller, use a 1/4 inch (6m-8m) nap roller.
3) If application is by spray, use a standard airless sprayer (2 gallons/minute at 3,300 psi) with a .017-.021 tip.
   - **NOTE:** The number of applications and the thickness of each should be in accordance with the job specifications.

MINIMUM SPREAD RATES (mil thickness)

All Surfaces – Apply 1st application at 200 sq ft/gallon (18 sq mtr/gallon; use a roller to force coating into pores); 8 mils wet/4 mils dry (to penetrate into pores.) Allow 4 hours to dry and ventilate well, then apply 2nd application of 100% MOIST METAL GRIP at 200 sq ft/gallon; 8 mils wet, 4 mils dry. Wait 24 hours, and apply the last coat of MOIST METAL GRIP at 200 sq ft/gallon.

CURE TIME

Note: Surface and ambient temperatures will determine cure time which is normally 14 full days. Introduction of heat over surface will enhance the cure time. Potable water must allow full cure before filling tanks.

Induction Period: 30 minutes at 70°F (21°C); No induction time is necessary over 90°F (32°C). EXCEPTION: See Temperature #5 for vertical surface application.

Note: It is critical that each coat of MOIST METAL GRIP be firmly adhered to the substrate before the next coat is applied. Depending on ambient and surface temperatures, it may take longer than a 24-hour recoat application window.

CLEAN-UP EQUIPMENT

1) After completion, spray systems should be flushed and cleaned with MEK or other comparable solvents.
2) After completion, brushes and rollers can be cleaned with MEK or comparable solvents, stored and reused.

SAFETY DATA SHEET

SECTION 1: Identification of the substance

1.1 PRODUCT IDENTIFIER: MOIST METAL GRIP base, bisphenol-A Type Epoxy
GHS PRODUCT INDENTIFIED: Global Harmonized System #3208.90.0000

1.2 PRODUCT USE: Cover and protect all metal surfaces above & below waterline

1.3 SUPPLIER: SUPERIOR PRODUCTS INT'L II, INC.
10835 W. 78th St., Shawnee, KS 66214 USA

1.4 EMERGENCY TELEPHONE NUMBER: 800-424-9300; 202/483-7616

SECTION 2: Hazard identification

2.1 Classification of the substance: Flammable liquids-Category 2. Acute toxicity-inhalation/oral-Category 4. Skin irritation-Category 2. Serious eye damage/irritation-Category 2A. Aspiration hazard-Category 1.

2.2 Label elements: Signal Word: DANGER Hazard Symbol:

Hazard Statement: Highly flammable liquid and vapor. Harmful if swallowed (oral). Harmful if inhaled (gas, vapour, dust, mist). Causes skin irritation. May cause respiratory irritation or may cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure. May be fatal if swallowed and enters airways.

SECTION 3: Composition/information on ingredients

3.2

Ingredient compositions	%	CAS/PIN	Ingredient compositions	%	CAS/PIN
Methyl N-Amyl Ketone	<10	110-43-0 50.00	Xylene	10-15	1330-20-7
Methyul Isobutyl Ketone	<10	108-10-1 50.00	Cumene	<0.1	98-82-8
Bisphenol Epoxy Resin	25-35	Proprietary	Ethyl Benzene	<0.1	100-41-4

SECTION 4: First aid measures

4.1 Description of first aid measures

INHALATION: Remove to fresh air. Give oxygen if required. Seek medical help, if needed.

EYES: Flush w/water for at least 15 minutes; see physician.

SKIN: Remove contaminated clothing; wash affected areas w/mild soap & water.

INGESTION: Do not induce vomiting. Give 1-2 glasses milk or water. Seek medical attention according to amount of product ingested.

SECTION 5: Firefighting measures

5.1 Extinguishing media: Foam, water spray (fog), dry chemical, carbon dioxide & vaporizing liquid type extinguishing agents

5.2 Special hazards arising from the substance or mixture:
Hazardous combusion products: Carbon monoxide, aldehydes, fumes
Autoignition Temperature.: <499C. degrees Minimum ignitions energy: 6.1%
Flash point: 15.5C. TCC Flammable limits: (Lower) 1.4% / (Upper) NAV%
Sensitivity to static discharge? NAV
Sensitivity to mechanical impact? NAV
Conditions of flammability: Spraying/activities that create rinely divided droplets around open flame

5.3 Advice for firefighters: Firefighters should wear full-body protection & SCBA

SECTION 6: Accidental release measures

6.1 Personal precautions: Use protective clothing; use non-sparking tools. Product may form flammable vapour-air mixture so take measures against build up of static discharge.

6.3 Methods of cleanup: Ventilate the area, control spill by coveing w/sawdust or similar agent. Pour contamination solution over spill (non-ionic surfactant Union Carbide'sTergitol TMN-10 (20%) + water (80%); avoid breathing vapors.

SECTION 7: Handling and storage

7.1 Precautions for safe handling: Ground all containers; use non-sparking tools. Avoid contact with skin, eyes or clothing. Empty containers may contain residual liquid or vapors and should not be pressurized, cut, welded or exposed to ignition sources.

7.2 Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition. Keep away from children.

SECTION 8: Exposure Controls/personal protection

8.1 Control parameters: To be worn when spraying or within contained areas--Half-face respirator w/organic vapor filter, safety glasses w/shields, PVA or nitrile chemical-resistant gloves, skin protection; for all other applications, good judgement should be used.
ENGINEERING CONTROLS: To spray, mechanical exhaust ventilation is required.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:
PHYSICAL STATE: White liquid SOLUBILITY IN WATER: Insoluable pH: NAP
APPEARANCE AND ODOR: Ketone-dominant solvent order FREEZING POINT: NAP
BOILING POINT: >241C. deg. SPECIFIC GRAVITY: 1.6 ODOR THRESHOLD: NAV
COEFF. WATER/OIL: NAV EVAPORATION RATE: .5-1% VOLATILES BY WGT: 15-25%
VAPOUR DENSITY (Air=1): 1.0 VAPOUR PRESSURE: NAV SOLIDS BY VOLUME: 55-65%

SECTION 10: Stability and reactivity

10.1 Conditions of Reactivity: by high heat or fire
10.2 Conditions of Instability: Stable under normal conditions
10.3 Possibility of hazardous reactions: None known. 10.4 Conditions to avoid: None known.
10.5 Incompatible materials: Oxidizing materials, aminos, alcohols
10.6 Hazardous decomposition products: By high heat/fire--carbon dioxide, carbon monoxide, fumes, smoke, aldehydes

SECTION 11: Toxicology Information

11.1 Information on toxicological effects:
Acute toxicity - oral: If swallowed: HARMFUL OR FATAL - Burning sensation on mucous membranes and respiratory tract; flu-like symptoms (fever and chills)
Acute toxicity - inhalation: Vapors or mist can cause irritation. Chemical asthma - chest tightness, wheezing, coughing, shortness of breath; can cause lung damage.
Acute toxicity - dermal: May cause TEMPORARY skin discloration and irritation. May cause severe eye damage.
Health effects to over exposure to CONCENTRATE: Corrosive to mucuse membranes, eyes and skin. The seriousness of the lesions and the prognosis of intoxication depend directly upon the concentration and duration of exposure.

SECTION 12: Ecological Information

12.1 Toxicity
Air: 2.80 lbs./gallon; 330 VOC AVG* (see other) Water: Insoluble in water
Soil: Lead- and chromate-free, not hazardous under RCRA 40CFR

SECTION 13: Disposal considerations

13.1 Waste treatment methods: Incineration preferred. Dispose of as waste according to local regulations.

SECTION 14: Transport information

14.1 UN number: 1263 14.2 UN proper shipping name: Paint Related Material
14.3 Transport hazard class: Class 3 14.4 Packing Group: II
Product is considered hazardous material, to be handled according to IATA regulations

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance: No listed materials under Superfund Amendments & Reauthorization Act of 1988 (SARA) 302, 304, 311, 312. Meets European codes under Article 59(10) of the Reach regulation.

SECTION 16: Other information

*Product is compliant with many national and local VOC content regulations. However, because manufacturer is not familiar with all local VOC requirements, the user is responsible for understanding the local VOC rules and for verifying that the product selections meet the most current VOC requirements of the area in which the products are to be used.

PREPARED BY: J. Pritchett, Superior Products Int'l II, Inc. **DATE**: 2/17/20

SAFETY DATA SHEET

SECTION 1: Identification of the substance

1.1 PRODUCT IDENTIFIER: MOIST METAL GRIP curing agent
GHS PRODUCT INDENTIFIED: Global Harmonized System #3208.90.0000

1.2 PRODUCT USE: Cover and protect all metal surfaces above & below waterline

1.3 SUPPLIER: SUPERIOR PRODUCTS INT'L II, INC.
10835 W. 78th St., Shawnee, KS 66214 USA

1.4 EMERGENCY TELEPHONE NUMBER: 800-424-9300; 202/483-7616

SECTION 2: Hazard identification

2.1 Classification of the substance: Flammable liquids-Category 3. Acute toxity (oral/inhalation)-Category 4. Skin irritation-Category 2. Serious eye damage/irritation-Category 1. Skin sensitizer-Catetory 1. Aspiration hazard-Category 1.

2.2 Label elements: Signal Word: DANGER Hazard Symbol: 

Hazard Statement: Flammable liquid and vapor. Harmful if swallowed (oral). Harmful if inaled (gas, vapour, dust, mist). May cause respiratory irritation or damage to organs through prolonged or repeated exposure. May be fatal if swallowed and enters airways.

SECTION 3: Composition/information on ingredients

3.2

Ingredient compositions	%	CAS/PIN
Xylene	35-45	1330-20-7
1-Butanol	<10	71-36-3
Bisphenal Epoxy curing agent	50-60	Proprietary

Ingredient compositions	%	CAS/PIN
Ethyl Benzene	<1%	100-41-4
Cumene	<0.1%	98-82-8

SECTION 4: First aid measures

4.1 Description of first aid measures

INHALATION: Remove to fresh air. Give oxygen if required. Seek medical help, if needed.

EYES: Flush w/water for at least 15 minutes; see physician.

SKIN: Remove contaminated clothing; wash affected areas w/mild soap & water.

INGESTION: Do not induce vomiting. Give 1-2 glasses milk or water. Seek medical attention according to amount of product ingested.

SECTION 5: Firefighting measures

5.1 Extinguishing media: Dry chemical--monoammonium phosphate, potassium chloride, carbon dioxide, high expansion (protenic) chemical foam, water spray for large fires

5.2 Special hazards arising from the substance or mixture:
Hazardous combusion products: Carbon monoxide, aldehydes, fumes
Autoignition Temperature.: >488C. degrees Minimum ignitions energy: 6.1%
Flash point: 26.6C. TCC Flammable limits: (Lower) 1.4% / (Upper) NAV%
Sensitivity to static discharge? NAV
Sensitivity to mechanical impact? NAV
Conditions of flammability: Spraying/activities that create rinely divided droplets around open flame

5.3 Advice for firefighters: Firefighters should wear full-body protection & SCBA

SECTION 6: Accidental release measures

6.1 Personal precautions: Use protective clothing; use non-sparking tools. Product may form flammable vapour-air mixture so take measures against build up of static discharge.

6.3 Methods of cleanup: Use kitty litter or similar absorbent to contain spill. Neutralize w/solution of 80% water/20% Tergitol TMN-10.

SECTION 7: Handling and storage

7.1 Precautions for safe handling: Ground all containers; use non-sparking tools. Avoid contact with skin, eyes or clothing. Empty containers may contain residual liquid or vapors and should not be pressurized, cut, welded or exposed to ignition sources.

7.2 Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition. Keep away from children.

SECTION 8: Exposure Controls/personal protection

8.1 Control parameters: To be worn when spraying or within contained areas--Half-face respirator w/organic vapor filter, safety glasses w/shields, PVA or nitrile chemical-resistant gloves, skin protection; for all other applications, good judgement should be used.
ENGINEERING CONTROLS: To spray, mechanical exhaust ventilation is required.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:
PHYSICAL STATE: Liquid SOLUBILITY IN WATER: Insoluable pH: NAP
APPEARANCE AND ODOR: Amber-clear, aromatic solvent order FREEZING POINT: NAP
BOILING POINT: >241C. deg. SPECIFIC GRAVITY: 1.0 ODOR THRESHOLD: NAV
COEFF. WATER/OIL: NAV EVAPORATION RATE: 0.85% VOLATILES BY WGT: 40-50%
VAPOUR DENSITY (Air=1): 1.0 VAPOUR PRESSURE: NAV DENSITY: 7.8 lbs./gal (avg)
PERCENT SOLIDS BY VOLUME: 45-55%

SECTION 10: Stability and reactivity

10.1 Conditions of Reactivity: by high heat or fire
10.2 Conditions of Instability: Stable under normal conditions
10.3 Possibility of hazardous reactions: None known. 10.4 Conditions to avoid: None known.
10.5 Incompatible materials: Oxidizing materials, aminos, alcohols
10.6 Hazardous decomposition products: By high heat/fire--carbon dioxide, carbon monoxide, fumes, smoke, aldehydes

SECTION 11: Toxicology Information

11.1 Information on toxicological effects:
Acute toxicity - oral: If swallowed: HARMFUL OR FATAL - Causes chemical burns of mouth and stomach; corrosive to gastrointestinal tract; Paleness and cyanosis of the face; Excessive fluid in the mouth and nose; Bloating of stomach and belching; Nausea and vomiting; Risk of chemical pneumonitis and pulmonary edema
Acute toxicity - inhalation: Vapors or mist can cause irritation. People with asthma or lung problems may be more affected; smokers.
Acute toxicity - dermal: May cause TEMPORARY skin discloration and irritation. May cause severe eye damage.
Health effects to over exposure to CONCENTRATE: Corrosive to mucuse membranes, eyes and skin. The seriousness of the lesions and the prognosis of intoxication depend directly upon the concentration and duration of exposure.

SECTION 12: Ecological Information

12.1 Toxicity
Air: 3.65 lbs./gallon; Reactive-430 VOC* (see other) Water: Insoluble in water
Soil: Lead- and chromate-free, not hazardous under RCRA 40CFR

SECTION 13: Disposal considerations

13.1 Waste treatment methods: Incineration preferred. Dispose of as paint/aluminum waste according to local regulations.

SECTION 14: Transport information

14.1 UN number: 1263 14.2 UN proper shipping name: Paint Related Material
14.3 Transport hazard class: Class 3 14.4 Packing Group: III
Product is considered hazardous material, to be handled according to IATA regulations

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance: No listed materials under Superfund Amendments & Reauthorization Act of 1988 (SARA) 302, 304, 311, 312. Meets European codes under Article 59(10) of the Reach regulation.

SECTION 16: Other information

*Product is compliant with many national and local VOC content regulations. However, because manufacturer is not familiar with all local VOC requirements, the user is responsible for understanding the local VOC rules and for verifying that the product selections meet the most current VOC requirements of the area in which the products are to be used.

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