SPI COATINGS

PROVEN PERFORMANCE • REAL WORLD SOLUTIONS

INSULATION AND CORROSION SPECIALISTS

ENAMO GRIP 5000

Technical Data Sheet (05/29/19)

DESCRIPTION

ENAMO GRIP 5000 is a two-part aliphatic, polyester/polyurethane enamel available in clear and colors. ENAMO GRIP 5000 is unlike traditional "unsaturated" polyester coatings that use a peroxide cure. Already having a urethane backbone, the ENAMO GRIP 5000 formula also contains a "saturated" polyester. This blend forms a uniquely hard and extremely durable coating film, which demonstrates unsurpassed semi-gloss and color retention, as well as a chalk resistance when used in exterior applications. It is resistant to water and humidity, stains, acids, solvents, and chemicals, as well as having tremendous scuff, mar and impact resistance. ENAMO GRIP 5000 will self-level to an even and smooth finish. It has a high cross-link density which leads to higher chemical resistance and more internal flexibility of the coating film. ENAMO GRIP 5000 represents the optimum chemistry that is light stable (UV resistance) yet still provides outstanding acid and alkali resistance. ENAMO GRIP 5000 is used for applications for pH values between 5-14.

TYPICAL USES

- Outstanding alkali resistance and very good acid resistance.
- For architectural and maintenance solutions.
- Hardwoods, pretreated metals, primed metals and concrete.
- Anywhere an acid and alkali resistant topcoat is required.

APPLICATION METHODS

ENAMO GRIP 5000 can be applied to metal, concrete, masonry, wood and other porous surfaces. The application can be by brush, roller, or airless sprayer. ENAMO GRIP 5000 will reach approximately 80% cure within 72 hours of application with the remaining 20% attained over a period of 12-15 days. Recoating within the initial 72 hours should not require any surface preparation. After 72 hours, the surface should be sanded to improve the profile to improve adhesion. For specific instructions on surface preparation, mixing, and application, please refer to the SPI's application instructions for ENAMO GRIP 5000.

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

NOTE: Never use mineral spirits to prep surfaces or to thin this product.

NOTE: Do not apply thick coats.

MINIMUM SPREAD RATE (mil thickness)

Porous Surfaces – Apply 1 application of RUST GRIP® or MOIST METAL GRIP @ 200 sq ft/gallon (18 sq mtr/gallon) to prime. Apply 2 additional coats of ENAMO GRIP 5000 @ 200 sq ft/gallon; 8 mils wet / 4.8 mils dry (200 microns wet, 120 dry), each application.

Non-Porous Surfaces – First apply RUST GRIP® as a primer; then apply 1 coat of ENAMO GRIP 5000 @ 200 sq ft/gal. (18 sq mtr/gal.); 8 mils wet (200 microns)/4.8 mils dry (120 microns), as an architectural coating. Apply a 2nd coat of ENAMO GRIP in areas that may have machine or foot traffic, handrails, or anywhere there is consistent wear on the surface.

Clear Coat Only – Apply 3 applications of ENAMO GRIP 5000 @ 200 sq. ft. per gallon (18 sq. mtr./gallon); 8 mils wet / 4.8 mils dry (200 microns wet / 120 dry), each application.

PHYSICAL DATA

- Reacted Solids: White - By weight: 76 % / By volume: 60%
- Reacted Solids: Clear – By weight: 68% / By volume: 60%
- 30-60 minutes to tack free at 70°F (21°C)
- Overcoat window is three hours or less at 70°F (21°C)
- Pencil Hardness: 3H
- Lead-free / Chromate-free
- Cure for use in 15 days @ 70°F (21°C)
- Reacted Weight: White: 11.6 lbs/gallon; Clear: 8.62 lbs/gallon
- Aliphatic Polyester
- Shelf Life: Up to three years (unopened) under appropriate storage conditions (See MSDS)
- Reactive VOC – White or Clear: 1.41 lbs/gal; 169 grams per liter
- Impact Resistance: (Front) 70 psi / (Back) 5 psi
- Mix Ratio: 2 parts base to 1 part curing agent by volume
- Pot-Life: 3-4 hours at 70°F (21°C), 1 hour at 90°F (32°C). In hot climates (95°F-35°C and above) pot life can reduce to 1.5 hour. Set pails in ice or ice water to extend pot life.
- All colors available with established minimum ordered quantities
- Excellent resistance against gasoline, diesel, and Skydrol
- Maximum Surface Temperature when applying: 150°F (65°C)
- Minimum Surface Temperature when applying: 40°F (5°C)
- Maximum Surface Temperature after curing: 300°F (149°C)
- Not to be used for total submersion under fluids or water
- In hot (90°F) temperatures and 85% humidity climates, cut the ENAMO GRIP 3-gallon kit with one quart of MAK solvent (Methyl n-Amyl Ketone) to slow down the flash off and skinning of the surface film.
- Resistant to animal fats
- Non-sparking

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 flame, fire, or other sources of ignition. For more specific safety procedures, please refer to the ENAMO GRIP 5000 Material Safety Data Sheet. **KEEP OUT OF REACH OF CHILDREN.**

SPI COATINGS

PROVEN PERFORMANCE • REAL WORLD SOLUTIONS

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ENAMO GRIP 5000

Application Instructions (07/1/16)

ENAMO GRIP 5000 is a two-part aliphatic polyester urethane enamel available in clear and colors. It forms a uniquely hard and durable coating film, which demonstrates unsurpassed semi-gloss and color retention, as well as chalk resistance when used in exterior applications. It is resistant to water and humidity, stains, acids, solvents, and chemicals, as well as having tremendous scuff, mar and impact resistance. ENAMO GRIP 5000 will self-level to an even and smooth finish. It has a high cross-link density which leads to higher chemical resistance and more internal flexibility of the coating film. ENAMO GRIP 5000 represents the optimum chemistry that is light stable (UV resistance) yet still provides outstanding acid and alkali resistance. ENAMO GRIP 5000 is used for application pH values between 5-14.

SURFACE PREPARATION

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

1) Use general degreaser if needed.
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 must be completely dry before applying.

1) ENAMO GRIP 5000 must be applied during proper temperatures (below) and 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 ENAMO GRIP 5000 can only be applied when the 1st coat becomes tacky to the touch and has little to no transfer of coating. After this stage, the surface must be lightly sanded to improve the profile.

MIXING

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

POT LIFE

3-4 hours at 70°F (21°C) - 1 hour at 90°F (32°C)

TEMPERATURE

1) Apply between 40°F (4°C) and 100°F (38°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 60°F (16°C). If below 60°F (16°C), allow mixed product to stand for 30 minutes before using.

APPLICATION

ENAMO GRIP 5000 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 nap roller.
3) If application is by spray, use a standard airless sprayer (1.5 gallons/minute at 3,300 psi.) with a .011-.015 tip.
   - ***NOTE***: The number of applications and the thickness of each should be in accordance with the job specifications.
   - ***NEVER apply thick coats.*** Let the thin coats tack before applying the next coat. If bubbling occurs, let dry, sand and apply a thin coat for a finish.
   - ***NOTE:*** It may be necessary to use a "bubble breaker" when using a brush or roller.
   - ***NOTE:*** Temperatures must always be a minimum of 5 degrees above the dew point during application.
   - ***NOTE***: In hot (90°F) temperatures and 85% humidity climates, cut the ENAMO GRIP 3-gallon kit with one quart of MAK solvent (Methyl n-Amyl Ketone) to slow down the flash off and skinning of the surface film.

MINIMUM SPREAD RATES (mil thickness)

Porous Surfaces – Apply 1 application of RUST GRIP® or MOIST METAL GRIP @ 200 sq ft/gallon (18 sq mtr/gallon) to prime. Apply 2 additional coats of ENAMO GRIP 5000 @ 200 sq ft/gallon; 8 mils wet / 4.8 mils dry (200 microns wet, 120 dry), each application.

Non-Porous Surfaces – First apply RUST GRIP® as a primer; then apply 1 coat of ENAMO GRIP 5000 @ 200 sq ft/gal. (18 sq mtr/gal.); 8 mils wet (200 microns)/4.8 mils dry (120 microns), as an architectural coating. Apply a 2nd coat of ENAMO GRIP in areas that may have machine or foot traffic, handrails, or anywhere there is consistent wear on the surface.

Clear Coat Only – Apply 3 applications of ENAMO GRIP 5000 @ 200 sq. ft. per gallon (18 sq. mtr./gallon); 8 mils wet / 4.8 mils dry (200 microns wet / 120 dry), each application.

CURE TIME

1) 30-60 minutes to tack free at 70°F (21°C).
2) Overcoat window is 3-4 hours or less at 70°F (21°C).
3) If temperature is over 90°F (32°C), overcoat window and pot life is shortened to 1 hour.
4) Cures for use in 15 days @ 70°F (21°C)

CLEAN-UP EQUIPMENT

1) During breaks, spray system should be flushed with solvent.
2) After completion, spray systems should be flushed and cleaned with MEK or other comparable solvents.
3) After completion, brushes and rollers should be cleaned with MEK or other comparable solvents, stored and re-used.

APPLICATION OVER CAULK

Only use a high performance, solvent-borne, polyurethane caulk. (Do not use a water-borne caulk or one that is water soluble.)

SAFETY DATA SHEET (E/S/10/02)

SECTION I - IDENTIFICATION OF PRODUCT AND COMPANY:

PRODUCT IDENTIFIER: ENAMO GRIP 5000 BASE (clear)
GHS PRODUCT IDENTIFIED: Global Harmonized System #3208.90.000

CHEMICAL TYPE: Two-part, Hydroxl functional polyol
MANUFACTURER: SUPERIOR PRODUCTS INT'L II, INC.
ADDRESS: 10835 W. 78th St., Shawnee, KS 66214
PRODUCT USE: Applied to provide a tough, protective topcoat against chemicals/ acids
EMERGENCY TELEPHONE NUMBER: 800/424-9300; 202/483-7616

SECTION II - HAZARD IDENTIFICATION:

The product is a flammable, solvent-based polyurethane and should be treated according to all known safety precautions. Refer to Section VII for Storage and Handling recommendations, Section VIII for Personal Protection, Section XIV for transport.

SECTION III - HAZARDOUS INGREDIENTS:

HAZARDOUS INGREDIENTS	%	CAS/PIN	TLV	PEL
n-butyl acetate	23.61	123-86-4	150.00	150.00
methyl n-Amyl Ketone	24.82	110-43-0	50.00	50.00

SECTION IV - FIRST AID MEASURES:

INHALATION: Remove to fresh air. Give oxygen if required. Seek medical help.
EYES: Flush w/clear lukewarm water for 15-20 minutes, occasionally lifting eyelids. See physian
SKIN: Remove contaminated clothing. Wash affect areas & clothing w/mild soap & water.
INGESTION: Do not induce vomiting. Keep at rest. Get prompt medical attention.

SECTION V - FIREFIGHTING MEASURES:

CONDITIONS OF FLAMMABILITY: Spraying or other activities to create finely divided droplets around open flame/sparks
HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide, aldehydes, fumes
AUTOIGNITION TEMP.: >499C. degrees **FLASH POINT & METHOD**: 60F. TCC
FLAMMABLE LIMITS: (Lower) 1.4% **(Upper)** NAV
SENSITIVITY TO STATIC DISCHARGE? NAV
SENSITIVITY TO MECHANICAL IMPACT? NAV
SPECIAL PROCEDURES: Firefighters should wear full-body protection & SCBA
MEANS OF EXTINCTION: Foam, water spray (fog), dry chemical, carbon dioxide & vaporizing liquid type extinguishing agents

SECTION VI - ACCIDENTAL RELEASE MEASURES:

Ventilate the area, control spill by covering w/sawdust or similar agent. Pour decontamination solution over spill (non-ionic surfactant Union Carbide's Tergitol TMN-10 (20%) + water (80%); avoid breathing vapors

SECTION VII - HANDLING AND STORAGE:

Storage Requirements: Maintain temperature between 32-122F. degrees; average shelf life is 3 years @ 77F. degrees. Empty containers may contain residual liquid or vapors, and should not be pressurized, cut, welded or exposed to ignition sources.
Handling Procedures/Equipment: Ground all containers; use non-sparking tools. Keep away from ignition sources as liquid contains volatiles that give off invisible vapors.

SECTION VIII - EXPOSURE CONTROLS AND PERSONAL PROTECTION:

Personal Protective Equipment: Half-face respirator w/organic vapor filter, safety glasses w/shields, PVA or nitrile chemical-resistant gloves, skin protection

Engineering Controls: Mechanical exhaust fans; use explosion proof equipment

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE AND ODOR: Base--Clear liquid, pungent ketone solvent odor
SOLUBILITY IN WATER: Insoluble **PHYSICAL STATE**: liquid
FREEZING POINT: NAP **BOILING POINT**: >241F. deg. **pH**: NAP
SPECIFIC GRAVITY: .99 **ODOR THRESHOLD**: NAV
COEFF. WATER/OIL: NAV **EVAPORATION RATE**: 1.22%
VAPOUR DENSITY (Air = 1): 1.0 **VAPOUR PRESSURE**: NAV
VOLATILES: 56%

SECTION X - STABILITY AND REACTIVITY DATA:

CONDITIONS OF REACTIVITY: By high heat or fire
CHEMICAL INCOMPATIBILITY: Oxidizing materials, aminos, alcohols
CONDITIONS OF INSTABILITY: Stable, under normal conditions
HAZARDOUS DECOMPOSITION PRODUCTS: By high heat/fire--Carbon dioxide, carbon monoxide, fumes, smoke, aldehydes
CORROSIVE BEHAVIOR? NO

SECTION XI - TOXICOLOGICAL PROPERTIES:

ROUTES OF ENTRY:SKIN CONTACT **_X_** EYE CONTACT **_X_** INHALATION **_X_**
SYNERGISTIC PRODUCTS **NAV** **EXPOSURE LIMITS**: NAV
EFFECTS OF ACUTE EXPOSURE: Burning sensation on mucous membranes & respiratory tract. Flu-like symptoms (fever and chills); skin irritation
EFFECTS OF CHRONIC EXPOSURE: Chemical asthma - chest tightness, wheezing, coughing, shortness of breath. Can cause lung damage.
MUTAGENICITY: NAV **CARCINOGENICITY**: NAV
IRRITANCY: Burning sensation **TERATOGENICITY**: NAV
REPRODUCTIVE TOXICITY: NAV
SENSITIZATION: Can cause future reaction to lesser amounts

SECTION XII - ENVIRONMENTAL INFORMATION:

Air: 4.04 lbs./gallon V.O.C.
Water: Insoluble in water
Soil: Lead- and chromate-free/not hazardous under RCRA 40CFR

SECTION XIII - WASTE DISPOSAL:

Incineration preferred. Dispose of in accordance with federal, state and local government regulations.

SECTION XIV - TRANSPORT INFORMATION:

Classified a hazardous material (Class 3//UN1263//P.G. II), and should be marked and handled according to specific regulations. Tariff code: 3208.90.0000

SECTION XV - REGULATORY INFORMATION:

Materials listed under Superfund Amendments & Reauthorization Act of 1988 (SARA) Title III 302, 304, 311, 312, 313: Methyl Isobutyl Ketone (CAS 108-10-1), Toluol (CAS 108883)

SECTION XVI - OTHER INFORMATION:

NAV

PREPARATION INFORMATION:

PREPARED BY: J. Pritchett, Superior Products Int'l II, Inc. DATE: 5/12/15

SAFETY DATA SHEET (E/S/10/02)

SECTION I - IDENTIFICATION OF PRODUCT AND COMPANY:

PRODUCT IDENTIFIER: ENAMO GRIP 5000 curing agent (clear)
GHS PRODUCT IDENTIFIED: Global Harmonized System #3208.90.000
CHEMICAL TYPE: Two-part, Hydroxl functional polyol
MANUFACTURER: SUPERIOR PRODUCTS INT'L II, INC.
ADDRESS: 10835 W. 78th St., Shawnee, KS 66214

PRODUCT USE: Applied to provide a tough, protective topcoat against chemicals/ acids
EMERGENCY TELEPHONE NUMBER: 800/424-9300; 202/483-7616

SECTION II - HAZARD IDENTIFICATION:

The product is a flammable, solvent-based polyurethane and should be treated according to all known safety precautions. Refer to Section VII for Storage and Handling recommendations, Section VIII for Personal Protection, Section XIV for transport.

SECTION III - HAZARDOUS INGREDIENTS:

HAZARDOUS INGREDIENTS	%	CAS/PIN	TLV	PEL
methyl n-Amyl Ketone	3.94	110-43-0	50.00	100.00
Homopolymer of HDI (catalyst)	96.06	28182-81-2		1mg/m3

SECTION IV - FIRST AID MEASURES:

INHALATION: Remove to fresh air. Give oxygen if required. Seek medical help.
EYES: Flush w/clear lukewarm water for 15-20 minutes, occasionally lifting eyelids. See physician.
SKIN: Remove contaminated clothing. Wash affected areas & clothing w/mild soap & water.
INGESTION: Do not induce vomiting. Keep at rest. Get prompt medical attention.

SECTION V - FIREFIGHTING MEASURES:

CONDITIONS OF FLAMMABILITY: Spraying or other activities to create finely divided droplets around open flame/sparks
HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide, aldehydes, fumes
AUTOIGNITION TEMP.: >499C. degrees **FLASH POINT & METHOD**: 24F. TCC
FLAMMABLE LIMITS: (Lower) 1.4% **(Upper)** NAV
SENSITIVITY TO STATIC DISCHARGE? NAV
SENSITIVITY TO MECHANICAL IMPACT? NAV
SPECIAL PROCEDURES: Firefighters should wear full-body protection & SCBA
MEANS OF EXTINCTION: Dry Chemical--monoammonium phosphate, potassium chloride, carbon dioxide, high expansion (protenic) ehcmical foam, water spray for large fires

SECTION VI - ACCIDENTAL RELEASE MEASURES:

Ventilate the area, control spill by covering w/sawdust or similar agent. Pour decontamination solution over spill (non-ionic surfactant Union Carbide's Tergitol TMN-10 (20%) + water (80%); avoid breathing vapors.

SECTION VII - HANDLING AND STORAGE:

Storage Requirements: Maintain temperature between 32-122F. degrees; average shelf life is 3 years @ 77F. degrees. Empty containers may contain residual liquid or vapors, and should not be pressurized, cut, welded or exposed to ignition sources.
Handling Procedures/Equipment: Ground all containers; use non-sparking tools. Keep away from ignition sources as liquid contains volatiles that give off invisible vapors.

SECTION VIII - EXPOSURE CONTROLS AND PERSONAL PROTECTION:

Personal Protective Equipment: Half-face respirator w/organic vapor filter, safety glasses w/shields, PVA or nitrile chemical-resistant gloves, skin protection

Engineering Controls: Mechanical exhaust fans; use explosion proof equipment

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE AND ODOR: Clear/pale yellow medium-low viscosity liquid

SOLUBILITY IN WATER: Insoluble, reacts slowly with water to liberate CO2 gas

FREEZING POINT: NAP **BOILING POINT**: >241F. deg. **VOLATILES:** 5.3%

SPECIFIC GRAVITY: 1.13 **ODOR THRESHOLD**: NAV

COEFF. WATER/OIL: NAV **EVAPORATION RATE**: 1.22%

VAPOUR DENSITY (Air = 1): 1.0 **VAPOUR PRESSURE**: NAV **pH**: NAP

SECTION X - STABILITY AND REACTIVITY DATA:

CONDITIONS OF REACTIVITY: By high heat or fire

CHEMICAL INCOMPATIBILITY: Oxidizing materials, aminos, alcohols

CONDITIONS OF INSTABILITY: Stable, under normal conditions; unstable if contacted with water

HAZARDOUS DECOMPOSITION PRODUCTS: By high heat/fire--Carbon dioxide, carbon monoxide, fumes, smoke, aldehydes

CORROSIVE BEHAVIOR? NO

SECTION XI - TOXICOLOGICAL PROPERTIES:

ROUTES OF ENTRY:SKIN CONTACT _**X**_ EYE CONTACT _**X**_ INHALATION _**X**_

SYNERGISTIC PRODUCTS **NAV** **EXPOSURE LIMITS**: NAV

EFFECTS OF ACUTE EXPOSURE: Burning sensation on mucous membranes & respiratory tract. Flu-like symptoms (fever and chills); skin irritation

EFFECTS OF CHRONIC EXPOSURE: Chemical asthma - chest tightness, wheezing, coughing, shortness of breath. Can cause lung damage.

MUTAGENICITY: NAV **CARCINOGENICITY**: NAV

IRRITANCY: Burning sensation **TERATOGENICITY**: NAV

REPRODUCTIVE TOXICITY: NAV

SENSITIZATION: Can cause future reaction to lesser amounts

SECTION XII - ENVIRONMENTAL INFORMATION:

Air: .37 lbs./gallon V.O.C.

Water: Insoluble in water

Soil: Lead- and chromate-free/not hazardous under RCRA 40CFR

SECTION XIII - WASTE DISPOSAL:

Incineration preferred. Dispose of in accordance with federal, state and local government regulations.

SECTION XIV - TRANSPORT INFORMATION:

Classified a hazardous material (Class 3//UN1263//P.G. II), and should be marked and handled according to specific regulations. Tariff code: 3208.90.0000

SECTION XV - REGULATORY INFORMATION:

Materials listed under Superfund Amendments & Reauthorization Act of 1988 (SARA) Title III 302, 304, 311, 312, 313: Methyl Isobutyl Ketone (CAS 108-10-1), Toluol (CAS 108883)

SECTION XVI - OTHER INFORMATION:

NAV

PREPARATION INFORMATION:

PREPARED BY: J. Pritchett, Superior Products Int'l II, Inc. DATE: 5/12/15

SAFETY DATA SHEET (E/S/10/02)

SECTION I - IDENTIFICATION OF PRODUCT AND COMPANY:

PRODUCT IDENTIFIER: ENAMO GRIP 5000 BASE (white)
GHS PRODUCT IDENTIFIED: Global Harmonized System #3208.90.000
CHEMICAL TYPE: Two-part, Hydroxl functional polyol
MANUFACTURER: SUPERIOR PRODUCTS INT'L II, INC.
ADDRESS: 10835 W. 78th St., Shawnee, KS 66214

PRODUCT USE: Applied to provide a tough, protective topcoat against chemicals/acids
EMERGENCY TELEPHONE NUMBER: **800/424-9300; 202/483-7616**

SECTION II - HAZARD IDENTIFICATION:

The product is a flammable, solvent-based polyurethane and should be treated according to all known safety precautions. Refer to Section VII for Storage and Handling recommendations, Section VIII for Personal Protection, Section XIV for transport.

SECTION III - HAZARDOUS INGREDIENTS:

HAZARDOUS INGREDIENTS	%	CAS/PIN	TLV	PEL
n-butyl acetate	12.2	123-86-4	150.00	150.00
methyl N-Amyl Ketone	13.2	110-43-0	50.00	50.00

SECTION IV - FIRST AID MEASURES:

INHALATION: Remove to fresh air. Give oxygen if required. Seek medical help.
EYES: Flush w/clear lukewarm water for 15-20 minutes, occasionally lifting eyelids. See physician.
SKIN: Remove contaminated clothing. Wash affected areas & clothing w/mild soap & water.
INGESTION: Do not induce vomiting. Keep at rest. Get prompt medical attention.

SECTION V - FIREFIGHTING MEASURES:

CONDITIONS OF FLAMMABILITY: Spraying or other activities to create finely divided droplets around open flame/sparks
HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide, aldehydes, fumes
AUTOIGNITION TEMP.: >499C. degrees **FLASH POINT & METHOD**: 60F. TCC
FLAMMABLE LIMITS: (Lower) 1.4% **(Upper)** NAV
SENSITIVITY TO STATIC DISCHARGE? NAV
SENSITIVITY TO MECHANICAL IMPACT? NAV
SPECIAL PROCEDURES: Firefighters should wear full-body protection & SCBA
MEANS OF EXTINCTION: Foam, water spray (fog), dry chemical, carbon dioxide & vaporizing liquid type extinguishing agents

SECTION VI - ACCIDENTAL RELEASE MEASURES:

Ventilate the area, control spill by covering w/sawdust or similar agent. Pour decontamination solution over spill (non-ionic surfactant Union Carbide's Tergitol TMN-10 (20%) + water (80%); avoid breathing vapors

SECTION VII - HANDLING AND STORAGE:

Storage Requirements: Maintain temperature between 32-122F. degrees; average shelf life is 3 years @ 77F. degrees. Empty containers may contain residual liquid or vapors, and should not be pressurized, cut, welded or exposed to ignition sources.
Handling Procedures/Equipment: Ground all containers; use non-sparking tools. Keep away from ignition sources as liquid contains volatiles that give off invisible vapors.

SECTION VIII - EXPOSURE CONTROLS AND PERSONAL PROTECTION:

Personal Protective Equipment: Half-face respirator w/organic vapor filter, safety glasses w/shields, PVA or nitrile chemical-resistant gloves, skin protection

Engineering Controls: Mechanical exhaust fans; use explosion proof equipment

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE AND ODOR: White-colored liquid, pungent ketone solvent odor

SOLUBILITY IN WATER: Insoluble **PHYSICAL STATE**: liquid

FREEZING POINT: NAP **BOILING POINT**: >241F. deg. **pH**: NAP

SPECIFIC GRAVITY: 1.56 **ODOR THRESHOLD**: NAV

COEFF. WATER/OIL: NAV **EVAPORATION RATE**: 1.22%

VAPOUR DENSITY (Air = 1): 1.0+ **VAPOUR PRESSURE**: NAV

VOLATILES: 48%

SECTION X - STABILITY AND REACTIVITY DATA:

CONDITIONS OF REACTIVITY: By high heat or fire

CHEMICAL INCOMPATIBILITY: Oxidizing materials, aminos, alcohols

CONDITIONS OF INSTABILITY: Stable, under normal conditions

HAZARDOUS DECOMPOSITION PRODUCTS: By high heat/fire--Carbon dioxide, carbon monoxide, fumes, smoke, aldehydes

CORROSIVE BEHAVIOR? NO

SECTION XI - TOXICOLOGICAL PROPERTIES:

ROUTES OF ENTRY:SKIN CONTACT _**X**_ EYE CONTACT _**X**_ INHALATION _**X**_
SYNERGISTIC PRODUCTS **NAV** **EXPOSURE LIMITS**: NAV

EFFECTS OF ACUTE EXPOSURE: Burning sensation on mucous membranes & respiratory tract. Flu-like symptoms (fever and chills); skin irritation

EFFECTS OF CHRONIC EXPOSURE: Chemical asthma - chest tightness, wheezing, coughing, shortness of breath. Can cause lung damage.

MUTAGENICITY: NAV **CARCINOGENICITY**: NAV

IRRITANCY: Burning sensation **TERATOGENICITY**: NAV

REPRODUCTIVE TOXICITY: NAV

SENSITIZATION: Can cause future reaction to lesser amounts

SECTION XII - ENVIRONMENTAL INFORMATION:

Air: 1.41 lbs./gallon V.O.C.
Water: Insoluble in water
Soil: Lead- and chromate-free/not hazardous under RCRA 40CFR

SECTION XIII - WASTE DISPOSAL:

Incineration preferred. Dispose of in accordance with federal, state and local government regulations.

SECTION XIV - TRANSPORT INFORMATION:

Classified a hazardous material (Class 3//UN1263//P.G. II/F.P.=15.5C), and should be marked and handled according to specific regulations. Tariff code: 3208.90.0000

SECTION XV - REGULATORY INFORMATION:

Materials listed under Superfund Amendments & Reauthorization Act of 1988 (SARA) Title III 302, 304, 311, 312, 313: Methyl Isobutyl Ketone (CAS 108-10-1), Toluol (CAS 108883)

SECTION XVI - OTHER INFORMATION:

PREPARATION INFORMATION:

PREPARED BY: J. Pritchett, Superior Products Int'l II, Inc. DATE: 1/16/15

NAP = Not Applicable NAV = Not Available

SAFETY DATA SHEET (E/S/10/02)

SECTION I - IDENTIFICATION OF PRODUCT AND COMPANY:

PRODUCT IDENTIFIER: ENAMO GRIP 5000 curing agent (white)
GHS PRODUCT IDENTIFIED: Global Harmonized System #3208.90.000
CHEMICAL TYPE: Aliphatic Polyisocyanate
MANUFACTURER: SUPERIOR PRODUCTS INT'L II, INC.
ADDRESS: 10835 W. 78th St., Shawnee, KS 66214
PRODUCT USE: Applied to provide a tough, protective topcoat against chemicals/acids
EMERGENCY TELEPHONE NUMBER: **800/424-9300; 202/483-7616**

SECTION II - HAZARDOUS INGREDIENTS:

HAZARDOUS INGREDIENTS	%	CAS/PIN	TLV	PEL
methyl n-Amyl Ketone	20	110-43-0	50.00	100.00
Homopolymer of HDI (catalyst)	80	28182-81-2		1mg/m3
Hexamethylene 1 (HDI)		822-06-2		

SECTION III - HAZARD IDENTIFICATION:

The product is a flammable, solvent-based polyurethane and should be treated according to all known safety precautions. Refer to Section VII for Storage and Handling recommendations, Section VIII for Personal Protection, Section XIV for transport.

SECTION IV - FIRST AID MEASURES:

INHALATION: Remove to fresh air. Give oxygen if required. Seek medical help.
EYES: Flush w/clear lukewarm water for 15-20 minutes, occasionally lifting eyelids. See physician.
SKIN: Remove contaminated clothing. Wash affected areas & clothing w/mild soap & water.
INGESTION: Do not induce vomiting. Keep at rest. Get prompt medical attention.

SECTION V - FIREFIGHTING MEASURES:

CONDITIONS OF FLAMMABILITY: Spraying or other activities to create finely divided droplets around open flame/sparks
HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide, aldehydes, fumes
AUTOIGNITION TEMP.: >499C. degrees **FLASH POINT & METHOD**: 102F. TCC
FLAMMABLE LIMITS: (Lower) 1.4% **(Upper)** NAV
SENSITIVITY TO STATIC DISCHARGE? NAV
SENSITIVITY TO MECHANICAL IMPACT? NAV
SPECIAL PROCEDURES: Firefighters should wear full-body protection & SCBA
MEANS OF EXTINCTION: Dry Chemical--monoammonium phosphate, potassium chloride, carbon dioxide, high expansion (protenic) chemical foam, water spray for large fires

SECTION VI - ACCIDENTAL RELEASE MEASURES:

Ventilate the area, control spill by covering w/sawdust or similar agent. Pour decontamination solution over spill (non-ionic surfactant Union Carbide's Tergitol TMN-10 (20%) + water (80%); avoid breathing vapors.

SECTION VII - HANDLING AND STORAGE:

Storage Requirements: Maintain temperature between 32-122F. degrees; average shelf life is 3 years @ 77F. degrees. Empty containers may contain residual liquid or vapors, and should not be pressurized, cut, welded or exposed to ignition sources.
Handling Procedures/Equipment: Ground all containers; use non-sparking tools. Keep away from ignition sources as liquid contains volatiles that give off invisible vapors.

SECTION VIII - EXPOSURE CONTROLS AND PERSONAL PROTECTION:

Personal Protective Equipment: Half-face respirator w/organic vapor filter, safety glasses w/shields, PVA or nitrile chemical-resistant gloves, skin protection

Engineering Controls: Mechanical exhaust fans; use explosion proof equipment

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE AND ODOR: Clear/pale yellow medium-low viscosity liquid

SOLUBILITY IN WATER: Insoluble, reacts slowly with water to liberate CO2 gas

FREEZING POINT: NAP **BOILING POINT**: >241F. deg. **VOLATILES:** 46%

SPECIFIC GRAVITY: 1.06 **ODOR THRESHOLD**: NAV

COEFF. WATER/OIL: NAV **EVAPORATION RATE**: 1.22%

VAPOUR DENSITY (Air = 1): 1.0 **VAPOUR PRESSURE**: NAV **pH**: NAP

SECTION X - STABILITY AND REACTIVITY DATA:

CONDITIONS OF REACTIVITY: By high heat or fire

CHEMICAL INCOMPATIBILITY: Oxidizing materials, aminos, alcohols

CONDITIONS OF INSTABILITY: Stable, under normal conditions; unstable if contacted with water

HAZARDOUS DECOMPOSITION PRODUCTS: By high heat/fire--Carbon dioxide, carbon monoxide, fumes, smoke, aldehydes

CORROSIVE BEHAVIOR? NO

SECTION XI - TOXICOLOGICAL PROPERTIES:

ROUTES OF ENTRY:SKIN CONTACT _**X**_ EYE CONTACT _**X**_ INHALATION _**X**_

SYNERGISTIC PRODUCTS **NAV** **EXPOSURE LIMITS**: NAV

EFFECTS OF ACUTE EXPOSURE: Burning sensation on mucous membranes & respiratory tract. Flu-like symptoms (fever and chills); skin irritation

EFFECTS OF CHRONIC EXPOSURE: Chemical asthma - chest tightness, wheezing, coughing, shortness of breath. Can cause lung damage.

MUTAGENICITY: NAV **CARCINOGENICITY**: NAV

IRRITANCY: Burning sensation **TERATOGENICITY**: NAV

REPRODUCTIVE TOXICITY: NAV

SENSITIZATION: Can cause future reaction to lesser amounts

SECTION XII - ENVIRONMENTAL INFORMATION:

Air: 1.41 lbs./gallon V.O.C.
Water: Insoluble in water
Soil: Lead- and chromate-free/not hazardous under RCRA 40CFR

SECTION XIII - WASTE DISPOSAL:

Incineration preferred. Dispose of in accordance with federal, state and local government regulations.

SECTION XIV - TRANSPORT INFORMATION:

Classified a hazardous material (Class 3//UN1263//P.G. III/F.P.=38.8C), and should be marked and handled according to specific regulations. Tariff code: 3208.90.0000

SECTION XV - REGULATORY INFORMATION:

Materials listed under Superfund Amendments & Reauthorization Act of 1988 (SARA) Title III 302, 304, 311, 312, 313: Methyl Isobutyl Ketone (CAS 108-10-1), Toluol (CAS 108883)

SECTION XVI - OTHER INFORMATION:

PREPARATION INFORMATION:

PREPARED BY: J. Pritchett, Superior Products Int'l II, Inc. DATE: 1/16/15

NAP = Not Applicable NAV = Not Available