



since 1895

Material Safety Data Sheet

NFPA	WHMIS	PPE	Transport Symbol

Preparation Date 19-Apr-2011

Revision Date 09-Nov-2011

Revision Number 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name White-Knight Metal Primer - Part A

Product Code 7841

UN-No 1263

Contact Manufacturer

The Garland Company, Inc.
3800 East 91st. Street
Cleveland, Ohio 44105-2197
Ph: (800) 762-8225 Fax: (216) 641-0633

Garland Canada, Inc.
1296 Martin Grove Rd.
Toronto, Ontario M9W 4X3
Ph: (416)747-7995 Fax: (416)747-1980

Emergency Telephone Number 1-800-762-8225 (24 Hrs.)

2. HAZARDS IDENTIFICATION

Emergency Overview

Flammable

Appearance White.

Physical State Liquid.

Odor Organic.

OSHA Regulatory Status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Mexico - Grade Not available

Potential Health Effects

Principle Routes of Exposure Inhalation, Skin contact, Eye contact.

Acute Effects

Eyes

Irritating to eyes.

Skin

Irritating to skin. May cause allergic skin reaction.

Inhalation

Harmful by inhalation. High concentrations can produce central nervous system depression.

Ingestion Harmful if swallowed.

Chronic Effects Repeated contact may cause allergic reactions in very susceptible persons.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions Respiratory disorders, including but not limited to asthma and bronchitis.

Interactions with Other Chemicals No information available.

Potential Environmental Effects See Section 12 for additional Ecological information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components

Chemical Name	CAS-No	Weight %	North American Hazard Indicator
n-Butyl acetate	123-86-4	5 - 10	1
Limestone	1317-65-3	5 - 10	1
Xylene	1330-20-7	1 - 5	1
Talc	14807-96-6	10 - 30	1
Titanium dioxide	13463-67-7	10 - 30	1
Methyl n-amyl ketone	110-43-0	10 - 30	1

4. FIRST AID MEASURES

Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Consult a physician if necessary.

Inhalation Move to fresh air. If breathing is difficult, give oxygen.

Ingestion Do not induce vomiting. Immediate medical attention is required.

Notes to Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Alcohol-resistant foam. Carbon dioxide (CO₂). Dry chemical. Water spray. Water fog.

Unsuitable Extinguishing Media Not available

Hazardous Combustion Products Carbon dioxide (CO₂), Oxides of nitrogen.

Explosion Data

Sensitivity to mechanical impact No

Sensitivity to static discharge Not available

Specific Hazards Arising from the Chemical

In the event of fire and/or explosion do not breathe fumes. In the event of fire, cool tanks with water spray.

Protective Equipment and Precautions for Firefighters

In the event of fire, wear self contained breathing apparatus. Use personal protective equipment. Standard procedure for chemical fires. Wear self-contained breathing apparatus and protective suit.

NFPA**Health 3****Flammability 3****Instability 0**

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Evacuate personnel to safe areas. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Remove all sources of ignition. Ensure adequate ventilation.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.
Methods for Containment	Dike with inert absorbent material
Methods for Cleaning Up	Soak up with inert absorbent material. Prevent product from entering drains. Pick up and transfer to properly labeled containers.
Other Information	Not applicable

7. HANDLING AND STORAGE

Handling	Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not smoke. Ensure adequate ventilation. Remove all sources of ignition. Store in a cool, dry area.
Storage	Keep tightly closed in a dry and cool place. Keep in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	Ontario TWAEV	Mexico
n-Butyl acetate	TWA: 150 ppm STEL: 200 ppm	TWA: 710 mg/m ³ TWA: 150 ppm	STEL: 200 ppm STEL: 950 mg/m ³ TWA: 710 mg/m ³ TWA: 150 ppm	STEL: 200 ppm STEL: 950 mg/m ³ TWA: 150 ppm TWA: 710 mg/m ³
Limestone		TWA: 15 mg/m ³ TWA: 5 mg/m ³	TWA: 10 mg/m ³	STEL: 20 mg/m ³ TWA: 10 mg/m ³
Xylene	TWA: 100 ppm STEL: 150 ppm	TWA: 100 ppm TWA: 435 mg/m ³	STEL: 650 mg/m ³ STEL: 150 ppm TWA: 100 ppm TWA: 435 mg/m ³	STEL: 150 ppm STEL: 655 mg/m ³ TWA: 435 mg/m ³ TWA: 100 ppm
Talc	TWA: 2 mg/m ³		TWA: 2 mg/m ³	TWA: 2 mg/m ³
Titanium dioxide	TWA: 10 mg/m ³	TWA: 15 mg/m ³	TWA: 10 mg/m ³	STEL: 20 mg/m ³ TWA: 10 mg/m ³
Methyl n-amyl ketone	TWA: 50 ppm	TWA: 465 mg/m ³ TWA: 100 ppm	TWA: 115 mg/m ³ TWA: 25 ppm	STEL: 100 ppm STEL: 465 mg/m ³ TWA: 235 mg/m ³ TWA: 50 ppm

Chemical Name	NIOSH IDLH
n-Butyl acetate	1700 ppm
Talc	1000 mg/m ³ containing no asbestos and <1% quartz

Chemical Name	NIOSH IDLH
Titanium dioxide	5000 mg/m ³
Methyl n-amyl ketone	800 ppm

Engineering Measures Do not allow ventilation equipment to draw material odors indoors.

Personal Protective Equipment

Eye/face Protection Safety glasses with side-shields. If splashes are likely to occur, wear. Face-shield.
Skin Protection Protective gloves. Long sleeved clothing.
Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White	
Odor	Organic	
Physical State	Liquid	
pH	Not available	
Flash Point	40°F / 4°C	
Method	Closed cup	
Autoignition Temperature	856.4°F / 458.0°C	
Boiling Point/Range	195.0°F / 90.56°C	
Freezing Point	Not available	
Flammability Limits in Air	Lower Not available	Upper Not available
Explosive Properties	Not available	
Oxidizing Properties	Not available	
Evaporation Rate	Not available	
Vapor Pressure	18.0 mmHg	
Vapor Density	Not available	
Specific Gravity	1.69	
Density	14.12	
Water Solubility	Not available	
Volatiles	36.93% by volume, 23.42% by weight	

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions
Conditions to Avoid	Keep away from heat, sparks and open flames. To avoid thermal decomposition, do not overheat.
Incompatible Materials	Strong oxidizing agents. Strong acids.
Hazardous Decomposition Products	None under normal use
Possibility of Hazardous Reactions	Hazardous polymerization does not occur

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

11. TOXICOLOGICAL INFORMATION

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
n-Butyl acetate	10768 mg/kg Rat	17600 mg/kg Rabbit	390 ppm Rat 4 h
Xylene	4300 mg/kg Rat	1700 mg/kg Rabbit	5000 ppm Rat 4 h
Titanium dioxide	10000 mg/kg Rat		
Methyl n-amyl ketone	1670 mg/kg Rat	12600 µL/kg Rabbit	

Chronic Toxicity

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen

Chemical Name	ACGIH	IARC	NTP	OSHA	Mexico
Titanium dioxide		Group 2B		X	

12. ECOLOGICAL INFORMATION

Ecotoxicity

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants

n-Butyl acetate

Freshwater Algae Data

Scenedesmus subspicatus EC50=320 mg/L (96 h)
Scenedesmus subspicatus EC50=674.7 mg/L (72 h)

Microtox Data

Photobacterium phosphoreum EC50=70.0 mg/L (5 min)
Photobacterium phosphoreum EC50=82.2 mg/L (15 min)
Pseudomonas putida EC50=959 mg/L (18 h)
Photobacterium phosphoreum EC50=98.9 mg/L (30 min)

Water Flea Data

water flea EC50=44 mg/L (48 h)

Xylene

Microtox Data

Photobacterium phosphoreum EC50=0.0084 mg/L (24 h)

Water Flea Data

Gammarus lacustris LC50=0.6 mg/L (48 h)
 water flea EC50=3.82 mg/L (48 h)

Persistence/Degradability

Not available

Bioaccumulation/ Accumulation

Not available

Mobility in Environmental Media

Not available

n-Butyl acetate

log Pow = 1.81

Xylene

log Pow = 2.77 - 3.15

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method	Dispose of in accordance with local, state, and federal regulations
Contaminated Packaging	Empty containers should be taken for local recycling, recovery or waste disposal
US EPA Waste Number	Not available

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name	Paint
Hazard Class	3
UN-No	1263
Packing Group	II

TDG

Proper Shipping Name	Paint
Hazard Class	3
UN-No	1263
Packing Group	II

MEX

Proper Shipping Name	Pintura
Hazard Class	3
UN-No	1263
Packing Group	II

ICAO

UN-No	1263
Proper Shipping Name	Paint
Hazard Class	3
Packing Group	II

IATA

UN-No	1263
Proper Shipping Name	Paint
Hazard Class	3
Packing Group	II

IMDG/IMO

Proper Shipping Name	Paint
Hazard Class	3
UN-No	1263
Packing Group	II

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	CHINA	KECL	PICCS	AICS
n-Butyl acetate	X	X	-	X	-	X	X	X	X	X

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	CHINA	KECL	PICCS	AICS
Limestone	X	-	X	X	-	-	X	X	X	X
Xylene	X	X	-	X	-	X	X	X	X	X
Talc	X	X	-	X	-	-	X	X	X	X
Ethyl 3-Ethoxypropionate	-	-	-	-	-	-	-	-	-	-
Barium sulfate	-	-	-	-	-	-	-	-	-	-
Calcium Metasilicate (particles not otherwise classified)	-	-	-	-	-	-	-	-	-	-
Polymer of Epoxy Resin and bisphenol A	-	-	-	-	-	-	-	-	-	-
Titanium dioxide	X	X	-	X	-	X	X	X	X	X
Zinc phosphate (nuisance dust)	-	-	-	-	-	-	-	-	-	-
Methyl n-amyl ketone	X	X	-	X	-	X	X	X	X	X
Trimethylolpropane (Nuisance Dust)	-	-	-	-	-	-	-	-	-	-

TSCA	Complies
DSL	Complies
NDSL	Complies
EINECS	Complies
ELINCS	Complies
ENCS	Complies
CHINA	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

USA**Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372.

Chemical Name	SARA 313 - Threshold Values
Xylene (CAS #: 1330-20-7)	1.0%

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any HAPs.

Chemical Name

Xylene (CAS #: 1330-20-7)

State Regulations**California Proposition 65**

WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

State Right-to-Know

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
n-Butyl acetate	X	X	X		X
Limestone	X		X		X
Xylene	X	X	X	X	X

Talc	X	X	X		X
Titanium dioxide	X	X	X		X
Methyl n-amyl ketone	X	X	X		X

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

B2 Flammable liquid

D2A Very toxic materials

16. OTHER INFORMATION

Prepared By Prepared By

Revision Date 09-Nov-2011

Revision Summary Not available

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS



Material Safety Data Sheet

NFPA	WHMIS	PPE	Transport Symbol

Preparation Date 19-Apr-2011

Revision Date 09-Nov-2011

Revision Number 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name White-Knight Metal Primer – Part B
Product Code 7841
UN-No 1263
Contact Manufacturer
 The Garland Company, Inc. 3800 East 91st. Street Cleveland, Ohio 44105-2197 Ph: (800) 762-8225 Fax: (216) 641-0633
 Garland Canada, Inc. 1296 Martin Grove Rd. Toronto, Ontario M9W 4X3 Ph: (416)747-7995 Fax: (416)747-1980

Emergency Telephone Number 1-800-762-8225 (24 Hrs.)

2. HAZARDS IDENTIFICATION

Emergency Overview		
Combustible material		
Appearance Colorless.	Physical State Liquid.	Odor Solvent.

Mexico - Grade Not available

Potential Health Effects

Principle Routes of Exposure Skin contact, Inhalation, Eye contact, Ingestion, Skin Absorption.

Acute Effects
Eyes Irritating to eyes.

Skin	Irritating to skin. Sensitizer. Avoid contact with skin. If sensitized, repeated exposures will result in irritation, reddening, and rashes even for very low exposures.
Inhalation	Irritating to respiratory system.
Ingestion	Harmful if swallowed.
Chronic Effects	Contains Hexylene glycol which has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain. NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Isocyanate vapors or mist at concentrations above the TLV can irritate the mucous membranes in the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung capacity.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions Not available

Interactions with Other Chemicals Not available

Potential Environmental Effects See Section 12 for additional Ecological information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components

Chemical Name	CAS-No	Weight %	North American Hazard Indicator
Polyhexamethylene Diisocyanate	28182-81-2	60 - 100	1
Petroleum naphtha, light aromatic	64742-95-6	1 - 5	1

4. FIRST AID MEASURES

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician.
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Ingestion	Do not induce vomiting. Immediate medical attention is required.
Notes to Physician	Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Alcohol-resistant foam. Carbon dioxide (CO ₂). Dry chemical. Water fog.
Unsuitable Extinguishing Media	Keep away from sources of ignition - No smoking.
Hazardous Combustion Products	Carbon dioxide (CO ₂), Carbon oxides, Oxides of nitrogen.
<u>Explosion Data</u>	

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	
pH	Not available	
Flash Point	135°F / 57°C	
Autoignition Temperature	797°F / 425°C	
Boiling Point/Range	220°F / 104°C	
Freezing Point	Not available	
Flammability Limits in Air	Lower Not available	Upper Not available
Explosive Properties	Not available	
Oxidizing Properties	Not available	
Evaporation Rate	Not available	
Vapor Pressure	6.00	mmHg
Vapor Density	4.00	
Specific Gravity	1.126	
Density	9.4	
Water Solubility	Reacts slowly with water	
Volatiles	12.9 % by volume; 10.0 % by weight	

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions
Conditions to Avoid	Moisture (potentially will lead to gas formation and warming). Keep away from heat, sparks and open flames.
Incompatible Materials	Strong oxidizing agents. Bases. Acids.
Hazardous Decomposition Products	Carbon dioxide (CO ₂). Carbon monoxide. Hydrogen cyanide.
Possibility of Hazardous Reactions	None under normal processing

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information 000

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Polyhexamethylene Diisocyanate			18500 mg/m ³ Rat 1 h
Petroleum naphtha, light aromatic	8400 mg/kg Rat	2000 mg/kg Rabbit	3400 ppm Rat 4 h 5.2 mg/L Rat 4 h
1,2,4-Trimethylbenzene	3400 mg/kg Rat	3160 mg/kg Rabbit	18 g/m ³ Rat 4 h

Chronic Toxicity

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen

12. ECOLOGICAL INFORMATION

Ecotoxicity

12. ECOLOGICAL INFORMATION

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants

Petroleum naphtha, light aromatic

Water Flea Data

Daphnia magna EC50=6.14 mg/L (48 h)

1,2,4-Trimethylbenzene

Water Flea Data

Daphnia magna EC50=6.14 mg/L (48 h)

Persistence/Degradability	Not available
Bioaccumulation/ Accumulation	Not available
Mobility in Environmental Media	Not available

1,2,4-Trimethylbenzene

log Pow = 3.63

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method	Dispose of in accordance with local, state, and federal regulations
Contaminated Packaging	Empty containers should be taken for local recycling, recovery or waste disposal
US EPA Waste Number	Not available

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name	Paint related material
Hazard Class	3
UN-No	1263
Packing Group	III

TDG

Proper Shipping Name	Paint related material
Hazard Class	3
UN-No	1263
Packing Group	III

MEX

Proper Shipping Name	Pinte el material relacionado
Hazard Class	3
UN-No	1263
Packing Group	III

ICAO

UN-No	1263
Proper Shipping Name	Paint related material

14. TRANSPORT INFORMATION

Hazard Class	3
Packing Group	III

IATA

UN-No	1263
Proper Shipping Name	Paint related material
Hazard Class	3
Packing Group	III

IMDG/IMO

Proper Shipping Name	Paint related material
Hazard Class	3
UN-No	1263
Packing Group	III

15. REGULATORY INFORMATION

International Inventories

All of the components in the product are on the following Inventory lists: No information available, U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (ECL), China (IECSC), Japan (ENCS), Philippines (PICCS).

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	CHINA	KECL	PICCS	AICS
Polyhexamethylene Diisocyanate	X	X	-	-	-	-	X	X	X	X
Petroleum naphtha, light aromatic	X	X	-	X	-	-	X	X	X	X
1,2,4-Trimethylbenzene	X	X	-	X	-	X	X	X	X	X

TSCA	Complies
DSL	Complies
NDSL	Complies
EINECS	Does not Comply
ELINCS	Does not Comply
ENCS	Does not Comply
CHINA	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

USA**Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372:

Chemical Name	SARA 313 - Threshold Values
1,2,4-Trimethylbenzene (CAS #: 95-63-6)	1.0%

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any HAPs.

State Regulations**California Proposition 65**

WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

State Right-to-Know

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
1,2,4-Trimethylbenzene	X	X	X	X	

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

B3 Combustible liquid

16. OTHER INFORMATION

Preparation Date 19-Apr-2011
Revision Date 09-Nov-2011
Revision Summary Not available

Disclaimer

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End of MSDS