

## **Wheel Assembly Lubricants for Resilient Wheels**

### **Purpose**

In some cases, Penn Machine Co. (PMC) has become aware of assembly lubricants being used in the assembly process of resilient wheels that are damaging to the rubber blocks. The purpose of this service bulletin is to raise the awareness of the importance of using the proper lubricant when assembling resilient wheels.

### **Assembly Lubricant**

When a resilient wheel is assembled, a lubricant must be used. This lubricant must be approved by PMC to maintain the integrity of the wheel and to keep the warranty (if applicable) valid. If you are unsure of the assembly lubricant you use, please contact PMC for clarification at **724.459.0302**.

The approved lubricants for resilient wheels are:

- Bonalin Gold (PMC p/n 00702045)
- Murphy's Tire and Tube Mounting\*

A copy of the MSDS for each of these products is attached to this Service Bulletin. Other lubricants must not be used.

\*Murphy's Tire and Tube Mounting Compound is a similar formula to the discontinued "Murphy's Oil Soap" gel. The manufacturer, JTM Products, identifies this product as "#506 Soft Amber Industrial Soap."

**NOTE:** IN THE PAST, PMC APPROVED THE USE OF OTHER LUBRICANTS. BECAUSE MANY SOAPS ARE CHANGING THEIR FORMULAS TO BECOME MORE "GREEN," OR FOR OTHER REASONS, PMC WILL NO LONGER TRACK DIFFERENT SOAPS. WE DO, HOWEVER, TRACK THE PRODUCTS WE SELL, AND WILL CHANGE, IF NECESSARY.

Some of the recommended lubricants need to be diluted before use. The "ideal" ratio varies slightly with environmental conditions.

*continued*

## Temperature & Humidity

You may need to experiment to determine the best ratio for your wheels. Too much lubricant can lead to tire slippage, and too little lubricant will make assembling the wheel difficult. Below are approximate mixture ratios for each lubricant:

- Bonalin Gold -- 5 parts water to 1 part soap
- Murphy's -- 3 parts water to 1 part soap

## Action

Wheels are safety-critical, and the proper ratio of assembly lubricant and mixture is necessary to maintain the wheels' integrity. Rubber Blocks are sensitive to chemicals and must only come in contact with approved assembly lubricants. Check to see which assembly lubricant you are using, and immediately stop using and discard any lubricant that is not Bonalin Gold or Murphy's Tire and Tube Mounting Compound.

If you have any questions regarding this Service Bulletin, please contact Penn Machine at **724.459.0302** or **pmcsales@pennmach.com**



SAI GLOBAL  
ISO 9001  
Quality



American  
Gear Manufacturers  
Association



**PENN MACHINE COMPANY**

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A Marmon/Berkshire Hathaway Company

Attachment A - MSDS Bonalin Gold

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date: 14.09.2015

Version: 9. 0

Revision: 14.09.2015

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

- **1.1 Product identifier**
- **Trade name:** **Schmierseife LIGA GOLD**  
**SPEZ.-GLM.LIGA GOLD**  
**SPEZ.-GLM.LIGA GOLD M**  
**GLEITMITTEL GOLD**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against: -**
- **Application of the substance / the preparation:**  
Lubricant  
Cleaning material / Detergent  
Separating agent
- **Uses advised against -**
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier/Manufacturer:**  
Peter Greven GmbH & Co. KG  
Peter-Greven-Str. 20-30  
53902 Bad Münstereifel  
Germany  
  
Tel.: +49-2253-313-0  
Fax: +49-2253-313-134
- **Email competent person:** sds@kft.de
- **Information department:** KFT-Chemieservice Tel.: +49-6155-86829-22
- **1.4 Emergency telephone number:**  
National Poison Information Service (NPIS)  
24 hour national number professionals only  
0844 892 0111  
  
National Health Service (NHS)  
24 hour national number consumer  
England and Scotland: 111  
Wales: 0845 46 47  
Northern Ireland: call your local General Practitioner  
  
Call 999 if there is a life-threatening incident.

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008** The product is not classified according to the CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Additional information:**  
Safety data sheet available on request.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable

*continued*

Attachment A - MSDS Bonalin Gold

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**GLEITMITTEL GOLD**

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· vPvB: Not applicable

**SECTION 3: Composition/information on ingredients**

· **3.2 Chemical characterisation: Mixtures**

· **Description:** Aqueous preparation of potassium soap based on special native fatty acids; filler

· **Dangerous components:**

CAS: 584-08-7 potassium carbonate <3%

EINECS: 209-529-3 Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335

· **Regulation (EC) No 648/2004 on detergents / Labelling for contents:**

soap ≥ 30%

perfumes

**SECTION 4: First aid measures**

· **4.1 Description of first aid measures**

· **General information:**

Change soiled clothing.

If symptoms persist or in case of doubt, seek medical advice.

· **After inhalation:** Inhalation of product is unlikely.

· **After skin contact:**

Wash with water and soap and rinse with plenty of water.

If symptoms persist, consult a doctor.

· **After eye contact:**

Rinse opened eye for several minutes under running water.

If symptoms persist, consult a doctor.

· **After swallowing:**

Rinse mouth with water.

Spit liquid out again.

In case of unintentional swallowing of larger quantities or if any symptoms occur seek medical treatment.

Never give anything by mouth to an unconscious person.

Do not induce vomiting.

If swallowed or in case of vomiting there is the risk of aspiration due to formation of foam.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed** Symptomatic treatment

**SECTION 5: Firefighting measures**

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Use fire fighting measures that suit the environment.

· **For safety reasons unsuitable extinguishing agents:** No data available

· **5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

Potassium oxides

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- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information:**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Collect contaminated fire fighting water separately. It must not enter the sewage system.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Avoid contact with eyes and skin.  
Particular danger of slipping on leaked/spilled product.
- **6.2 Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Do not allow to penetrate the ground/soil.
- **6.3 Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Clean the affected area carefully; suitable cleaners are:  
Warm water  
Make sure to recycle or dispose of in suitable receptacles.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling** Avoid contact with eyes and skin.
- **Information about protection against explosions and fires:** Observe the general rules of industrial fire protection.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store at ambient temperatures and under dry conditions.
- **Information about storage in one common storage facility:**  
Store away from foodstuffs.  
Store away from feed.
- **Further information about storage conditions:** Protect from frost.
- **Storage class:** 11 Combustible solids
- **7.3 Specific end use(s)** No further relevant information available

**SECTION 8: Exposure controls/personal protection**

- **Additional information about design of technical systems:** No further data; see section 7.
- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.

*continued*

Attachment A - MSDS Bonalin Gold

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- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The following instructions regarding the protective equipment refer to the industrial use of larger quantities. The usual precautionary measures should be adhered to when handling chemicals.  
Wash hands before breaks and at the end of work.  
Keep away from foodstuffs, beverages and feed.  
Remove all soiled and contaminated clothing immediately.  
Avoid contact with eyes and skin.  
Use skin protection cream for skin protection.
- **Breathing equipment:** Under normal conditions of use not required
- **Protection of hands:**  
Chemical resistant gloves (EN 374)  
Alkaline resistant gloves  
To avoid skin problems reduce the wearing of gloves to the required minimum.  
Check protective gloves prior to each use for their proper condition.  
Prior to contact with the watersoluble substance/product/preparation, apply waterinsoluble skin-protecting agent (fat-containing film former or W/O-emulsions).  
The glove material has to be impermeable and resistant to the product/substance/preparation.  
Selection of the glove material in consideration of the penetration times, rates of diffusion and the degradation  
After use of gloves apply skin-cleaning agents and skin cosmetics.
- **Material of gloves:**  
Natural rubber, NR  
Polychloroprene rubber (CR)  
Nitrile rubber, NBR  
Butyl rubber, BR  
Fluorocarbon rubber (FKM)  
The selection of suitable gloves depends upon the material, and also upon the quality of the gloves. The degree of protection will vary from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material:**  
≥480 min. natural rubber (0.5 mm)  
≥480 Min. (Polychloropren 0.5 mm)  
≥480 min nitrile rubber (0.35 mm)  
≥480 Min. Butyl-rubber (0.5 mm)  
≥480 Fluorocarbon rubber (0.4 mm)  
The exact penetration time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing

**SECTION 9: Physical and chemical properties**

- **9.1 Information on basic physical and chemical properties**
- **General Information:**
- **Appearance:**

Form:	Pasty
Colour:	Yellow
Odour:	Soapy
Odour threshold:	Not determined

Attachment A - MSDS Bonalin Gold

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· pH-value at 20 °C:	11.1-11.4
· Change in condition:	
Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not determined
Cloud point / clarification point:	< 10 °C
· Flash point:	Not applicable
· Flammability (solid, gaseous):	Not determined
· Ignition temperature:	Not determined
· Decomposition temperature:	Not determined
· Self ignition temperature:	Product is not self-igniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not applicable
Upper:	Not applicable
· Vapour pressure:	Not determined
· Density at 20 °C:	~ 1 g/cm <sup>3</sup> (DIN 53 243)
· Relative density:	Not determined
· Vapour density:	Not determined
· Evaporation rate:	Not determined
· Dissociation constant pKa	Not determined
· Solubility in / Miscibility with Water:	Soluble
· Partition coefficient (n-octanol/water):	Not determined
· Viscosity:	
dynamic:	Not determined
kinematic:	Not determined
· 9.2 Other information	Soluble in alcohol

**SECTION 10: Stability and reactivity**

- 10.1 Reactivity No further relevant information available
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided:  
No decomposition if used and stored according to specifications  
To avoid thermal decomposition do not overheat.
- 10.3 Possibility of hazardous reactions No dangerous reactions known
- 10.4 Conditions to avoid No further relevant information available
- 10.5 Incompatible materials:  
Oxidants  
Acids

*continued*

Attachment A - MSDS Bonalin Gold

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- **10.6 Hazardous decomposition products:**  
No hazardous decomposition products if instructions for storage and handling are followed

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
- **LD/LC50 values that are relevant for classification:** No toxicity data are available for the product itself.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** If swallowed or in case of vomiting there is the risk of aspiration due to formation of foam.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** Presently there are no ecotoxicological values available.
- **12.2 Persistence and degradability** No further relevant information available
- **12.3 Bioaccumulative potential** No further relevant information available
- **12.4 Mobility in soil** No further relevant information available
- **Additional ecological information:**
- **COD-value:** ~ 1200 mg O<sub>2</sub>/g
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous to water  
According to appendix 4 of VwVwS dated 17.05.1999 (German regulation)  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Danger to drinking water is possible if large quantities leak into the ground or into water course.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable
- **vPvB:** Not applicable
- **12.6 Other adverse effects** No further relevant information available

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation:**  
Must be recycled or disposed of according to the regulations. Waste has to be classified according to the European Waste Catalogue based on the identification of the waste generating source.
- **European waste catalogue:**  
07 00 00 WASTES FROM ORGANIC CHEMICAL PROCESSES



Attachment A - MSDS Bonalin Gold

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07 06 00 wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics  
07 06 99 wastes not otherwise specified

- **Uncleaned packagings:**
- **Recommendation:**  
Disposal must be made according to official regulations.  
Packagings that cannot be cleaned are to be disposed of in the same manner as the product.

**SECTION 14: Transport information**

· <b>14.1 UN-Number</b> · <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>14.2 UN proper shipping name</b> · <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>14.3 Transport hazard class(es)</b> · <b>ADR, ADN, IMDG, IATA</b> · <b>Class</b>	Void
· <b>14.4 Packing group</b> · <b>ADR, IMDG, IATA</b>	Void
· <b>14.5 Environmental hazards:</b> · <b>Marine pollutant:</b>	No
· <b>14.6 Special precautions for user</b>	Not applicable
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable
· <b>UN "Model Regulation":</b>	Void

**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Reasons for amendments:**  
EC Regulation 453/2010  
Information on formulation

Attachment A - MSDS Bonalin Gold

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**Classification CLP**

**Labelling**

**General revision**

• **Replaces version dated:** 12.06.2015

• **Relevant phrases**

As mentioned in section 3 of the safety data sheet (not relevant for labelling of the product)

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

• **Department issuing MSDS:**

KFT Chemieservice GmbH

Im Leuschnerpark, 3 64347 Griesheim

Postfach 1451 64345 Griesheim

Germany

Phone: +49 6155 86829-0 Fax: +49 6155 86829-25

Safety Data Sheet Service: +49 6155 86829-22

• **Contact:** Rebecca Hillrop

• **Abbreviations and acronyms:**

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

• **Sources:** Information provided by the manufacturer

• **\* Data compared to the previous version altered.**

Changes have been made to sections marked with a \*, as compared to the previous version.

Attachment B - Murphy's Tire and Tube Mounting Compound

**1. IDENTIFICATION**

**GHS Product Identifier**

**Product Name** Murphy's Concentrated Tire and Tube Mounting Compound

**Other Means of Identification**

**SDS #**  
**Chemical Formula** 93-11LNF or 2006-5  
**Other Information**

**Recommended Use of the Chemical and Restrictions on Use**

**Recommended Use** Tire Lubricant

**Details of the Supplier of the Safety Data Sheet**

**Supplier Address**  
JTM Products, Inc.  
31025 Carter Street  
Solon, OH 44139  
Tel. 440-287-2302  
800-229-6744  
Fax. 440-287-3095

**Emergency Telephone Number**

**Emergency Telephone** Chemtel 1-800-255-3924

**2. HAZARDS IDENTIFICATION**

**Classification**

This chemical is considered non-hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

**GHS classification**

Hazard categories:  
Skin Irritant 3  
Eye irritation: Eye Irritant 2B

**Label elements**

Signal word: Warning

*continued*

Attachment B - Murphy's Tire and Tube Mounting Compound

**Murphy's Concentrated Tire and Tube Mounting Compound**

**Revision Date: 17-Oct-2014**

**Hazard statements**

- H316 Causes mild skin irritation.
- H320 Causes eye irritation.

**Precautionary statements**

- P264 Wash skin thoroughly after handling.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

The product contains no substances which at their given concentration, are considered to be hazardous to health.

Components

CAS No.	Chemical Name	Quantity
7732-18-5	Water	60-70%
61788-65-6 EINECS 262-993-9	Potassium salt of vegetable oil (soap)	25-35%

Where range is displayed, the exact percentage (concentration) of composition has been withheld as a trade secret.

**4. FIRST AID MEASURES**

**First Aid Measures**

- Inhalation** Move to fresh air. If symptoms persist, call a physician
- Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. If symptoms persist, call a physician.
- Ingestion** Do NOT induce vomiting. Drink plenty of water. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately
- Skin Contact** Wash off immediately with soap and water. If skin irritation persists, call a physician.

**Most Important Symptoms and Effects, Both Acute and Delayed**

**Symptoms**

Direct contact with eyes may cause temporary irritation. Prolonged or repeated skin contact may cause irritation.

Attachment B - Murphy's Tire and Tube Mounting Compound

**Indication of any Immediate Medical Attention and Special Treatment Needed**

**Note to Physicians**      Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media**

Non-flammable

**Specific Hazards Arising from the Chemical**

No information available.

**Hazardous Combustion Products**

Sensitivity to Mechanical Impact    None

Sensitivity to Static Discharge      None

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment and Emergency Procedures**

**Personal Precautions**

Avoid contact with the skin and the eyes. Evacuate personnel to safe areas. Use personal protective equipment. Keep people away from and upwind of spill/leak.

**Environmental Precautions**

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Prevent entry into waterways, sewers, basements or confined areas. See Section 12 for additional Ecological information

**Methods and Material for Containment and Cleaning Up**

**Methods for Containment**

Dike to collect large liquid spills. Prevent leakage or spillage if safe to do so.

**Methods for Cleaning Up**

Dam up. Soak up with inert absorbent material. Place the bulk of any spilled material into properly labeled containers. Rinse any remaining material to sewage treatment facility. Clean up in accordance with all applicable regulations.

**7. HANDLING AND STORAGE**

**Precautions for Safe Handling**

**Handling**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Ensure adequate ventilation. Use only in area provided with appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Do not take internally.

Attachment B - Murphy's Tire and Tube Mounting Compound

**Conditions for Safe Storage, Including any Incompatibilities**

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers. Keep out of the reach of children.

**Incompatible Materials** Strong oxidizing agents. Strong bases

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control Parameters**

**Appropriate Engineering Controls**

**Engineering Controls** Eyewash stations Showers Ventilation systems.

**Individual Protection Measures, such as Personal Protective Equipment**

**Eye/Face Protection** Wear approved safety goggles.

**Skin and Body Protection** Lightweight protective clothing. Chemical resistant gloves, if needed, to avoid prolonged or repeated skin contact.

**Respiratory Protection** No special protective equipment required. If respirators are used, OSHA requires a written respiratory program that includes at least: medical certification training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

**General Hygiene Considerations**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended.

**Control Parameters** N.A.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on Basic Physical and Chemical Properties**

<b>Physical State</b>	Gel	<b>Odor</b>	Bland
<b>Appearance</b>	Clear gel	<b>Odor threshold</b>	Not determined
<b>Color</b>	Amber		

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks - Method</u></b>
pH	11	
Melting point/freezing point	< 0° C / < 32° F	
Boiling point/boiling range	> 104° C / > 220° F	
Flash point	Non-flammable	
Evaporation rate	Not applicable	
Flammability (solid, gas)	Not determined	

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**Flammability Limits in Air**

<b>Upper Flammability Limits</b>	Not applicable
<b>Lower Flammability Limits</b>	Not applicable
<b>Vapor Pressure</b>	Not applicable
<b>Vapor Density</b>	Not applicable
<b>Specific Gravity</b>	0.99
<b>Water Solubility</b>	Completely soluble
<b>Solubility in other Solvents</b>	Not determined
<b>Partition Coefficient</b>	Not determined
<b>Autoignition Temperature</b>	Not determined
<b>Decomposition Temperature</b>	Not determined
<b>Kinematic Viscosity</b>	Not determined
<b>Dynamic Viscosity</b>	Not determined
<b>Explosive Properties</b>	None
<b>Oxidizing Properties</b>	None

**10. STABILITY AND REACTIVITY**

**Reactivity**

Not reactive under normal conditions

**Chemical Stability**

Stable under recommended storage conditions

**Possibility of Hazardous Reactions**

None under normal processing

**Conditions to Avoid**

Contact with incompatible material

**Incompatible Materials**

Strong oxidizing agents

**Hazardous Decomposition Products**

Carbon oxides

**11. TOXICOLOGICAL INFORMATION**

**Information on Likely Route of Exposure**

**Product Information**

<b>Inhalation</b>	Not a likely route of exposure
<b>Eye Contact</b>	Causes eye irritation
<b>Skin Contact</b>	Causes mild skin irritation
<b>Ingestion</b>	Do not taste or swallow
<b>Symptoms</b>	Direct contact with eyes may cause temporary irritation. Prolonged or repeated contact may dry skin and cause irritation

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**Numerical Measures of Toxicity – Product**

The following values are calculated based on chapter 3.1 of the GHS document:

**LD50 Oral** 72,000 mg/kg; Acute toxicity estimate mg/kg mg/L

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

The environmental impact of this product has not been fully investigated.

**Persistence and Degradability**

No information available.

**Mobility**

Not Determined.

**Other Adverse Effects**

Not Determined.

**13. DISPOSAL CONSIDERATIONS**

**Waste Treatment Methods**

**Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations. Contact your supplier or a licensed contractor for detailed recommendations.

**Contaminated Packaging**

Do not re-use empty containers. Disposal should be in accordance with applicable regional, national and local laws and regulations.

**14. TRANSPORT INFORMATION**

**DOT** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**15. REGULATORY INFORMATION**

**International Inventories**

**TSCA** All ingredients appear on inventory

**DSL/NDSL** All components of this product are listed or are exempt

**EINECS/ELINCS** - *European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances / not available (N.A.)*

**ENCS** - *Japan Existing and New Chemical Substances/not available (N.A.)*

**IECSC** - *China Inventory of Existing Chemical Substances/not available (N.A.)*

**KECL** - *Korean Existing and Evaluated Chemical Substances/not available (N.A.)*

**PICCS** - *Philippines Inventory of Chemicals and Chemical Substances/not available (N.A.)*



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**Legend:**

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances

**US Federal Regulations**

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 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42): None known

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302): None Known

**U.S. State Regulations**

**California Proposition 65**

Diethanolamine <0.25%

**U.S. State Right-to-Know Regulations:** Not applicable

**U.S. EPA Label Information**

**EPA Pesticide Registration Number:** Not Applicable

**16. OTHER INFORMATION**

<b>NFPA</b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Instability</b>	<b>Special Hazards</b>
	1	0	0	Not determined
<b>HMIS</b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Physical Hazards</b>	<b>Personal Protection</b>
	1	0	0	Not determined

**Issuance Date** 18-Feb-2014  
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**Revision Note** New format

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**Disclaimer**

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet