SAFETY DATA SHEET

Date: October 2015

Section #1: PRODUCT AND COMPANY IDENTIFICATION

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24-Hour Emergency Number: Chemtrec – 1-800-424-9300

Product Identification: METS Blue Lubricant Series #4490
Product Name: Part# METS-LUBE-BLU-XXXX

2. Hazards Identification

Flammable Liquids, Category 2
Acute Toxicity: Oral, Category 4
Serious Eye Damage/Eye Irritation, Category 2A
Specific Target Organ Toxicity (single exposure), Category 3

GHS Signal Word: Danger

GHS Hazard Phrases:
- H225 - Highly flammable liquid and vapor.
- H302 - Harmful if swallowed.
- H319 - Causes serious eye irritation.
- H336 - May cause drowsiness or dizziness.

GHS Precaution Phrases:
- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P233 - Keep container tightly closed.
- P241 - Use explosion-proof electrical/ventilating/lighting/.../equipment.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
- P264 - Wash hands thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P271 - Use only outdoors or in a well-ventilated area.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.

GHS Response Phrases:
- P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
- P330 - Rinse mouth.
- P337+313 - If eye irritation persists, get medical advice/attention.

GHS Storage and Disposal Phrases:
- P403+235 - Store in cool/well-ventilated place.
- P405 - Store locked up.
- P501 - Dispose of contents/container to...
Potential Health Effects (Acute and Chronic):

Hazards not otherwise classified (HNOC) or not covered by GHS.

Repeated excessive exposure to ethylene glycol may cause irritation of the upper respiratory tract. In humans, effects have been reported on the central nervous system, including nystagmus (involuntary, rapid, rhythmic movement of the eyeball).

Chronic: May cause kidney injury.

Inhalation:

If ethylene glycol is heated or misted in work areas that are poorly ventilated, vapor/mist may accumulate and cause respiratory irritation and symptoms such as headache and nausea. Material has a very low vapor pressure at room temperature, so inhalation exposures are not expected unless material is heated or misted.

Skin Contact:

Low hazard for normal industrial handling. A single prolonged skin exposure is not likely to result in the material being absorbed in harmful amounts.

Eye Contact:

May cause moderate eye irritation.

Ingestion:

The lethal dose in adult humans for ethylene glycol is about 100 ml (1/3 cup). Swallowing may cause nausea, vomiting or diarrhea. Excessive exposure may cause CNS effects, cardiopulmonary effects (metabolic acidosis), and kidney failure. Toxicity follows 3-stage progression. (1) involves central nervous system effects including paralysis of eye muscles, convulsions, and coma. Metabolic acidosis and cerebral swelling may also occur. (2) involves cardiopulmonary system with symptoms of hypertension, rapid heart beat, and possible cardiac failure. (3) involves severe kidney abnormalities including possible renal failure.

In Case of Inhalation:

If ethylene glycol is heated or misted in work areas that are poorly ventilated, vapor/mist may accumulate and cause respiratory irritation and symptoms such as headache and nausea. Material has a very low vapor pressure at room temperature, so inhalation exposures are not expected unless material is heated or misted.

In Case of Skin Contact:

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. Get medical aid.

In Case of Eye Contact:

Wash off with soap and plenty of water. Consult a physician. In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

In Case of Ingestion:

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Emergency and First Aid Procedures:

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

In Case of Inhalation:

If breathed in, move person into fresh air. Consult a physician. If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Get medical aid.

In Case of Skin Contact:

Wash off with soap and plenty of water. Consult a physician. In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

In Case of Eye Contact:

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

In Case of Ingestion:

Rinse mouth with water. Consult a physician. Get medical aid.

Signs and Symptoms Of Exposure:

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Note to Physician:

Treat symptomatically and supportively.

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>Ethyl alcohol</td>
<td>&lt;60.0 %</td>
</tr>
<tr>
<td>107-21-1</td>
<td>Ethylene glycol</td>
<td>&lt;20.0 %</td>
</tr>
<tr>
<td>67-63-0</td>
<td>Isopropyl alcohol</td>
<td>&lt;20.0 %</td>
</tr>
</tbody>
</table>

4. First Aid Measures
5. Fire Fighting Measures

- **Flash Pt:** > 25.00 C  Method Used: Estimate
- **Explosive Limits:** LEL: No data.  UEL: No data.
- **Autoignition Pt:** No data.
- **Suitable Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam.
- **Fire Fighting Instructions:** Wear self-contained breathing apparatus for fire fighting if necessary. Further information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

6. Accidental Release Measures

- **Protective Precautions, Protective Equipment and Emergency Procedures:** Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.
- **Environmental Precautions:** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Use proper personal protective equipment as indicated in Section 8. Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

7. Handling and Storage

- **Precautions To Be Taken in Handling:** Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing.
- **Precautions To Be Taken in Storing:** Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Recommended storage temperature: -20 - -10 deg.C. Handle and store under inert gas. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture. Hygroscopic.

8. Exposure Controls/Personal Protection

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Partial Chemical Name</th>
<th>OSHA TWA</th>
<th>ACGIH TWA</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>Ethyl alcohol</td>
<td>PEL: 1000 ppm</td>
<td>TLV: 1000 ppm</td>
<td>No data.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STEL: 1000 ppm</td>
<td></td>
</tr>
<tr>
<td>107-21-1</td>
<td>Ethylene glycol</td>
<td>No data.</td>
<td>CEIL: 100 mg/m3 (H)</td>
<td>No data.</td>
</tr>
<tr>
<td>67-63-0</td>
<td>Isopropyl alcohol</td>
<td>PEL: 400 ppm</td>
<td>TLV: 200 ppm</td>
<td>No data.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STEL: 400 ppm</td>
<td></td>
</tr>
</tbody>
</table>
Respiratory Equipment (Specify Type): Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Eye Protection: Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Wear chemical splash goggles.

Protective Gloves: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full contact: Material: Nitrile rubber Minimum layer thickness: 0.4 mm.

This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Other Protective Clothing: Impervious clothing. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Protective garments not normally required.

Engineering Controls (Ventilation etc.): Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Work/Hygienic/Maintenance Practices: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Environmental Exposure Controls: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. Physical and Chemical Properties

| Physical States: | [ ] Gas       | [ X ] Liquid       | [ ] Solid mixture. alcohol-like. |
| Melting Point:   | NA -89.50    | - 129.10 C         |
| Boiling Point:   | No data. - 197.00 C |
| Flash Pt:        | > 25.00 C    | Method Used: Estimate |
| Evaporation Rate:| No data.      |
| Explosive Limits:| LEL: No data. | UEL: No data. |
| Vapor Pressure (vs. Air or mm Hg): | No data. |
| Vapor Density (vs. Air = 1): | No data. |
| Specific Gravity (Water = 1): | ~ 0.985 |
| Density:         | ~ 0.949 G/ML |
| Solubility in Water: | No data. |
Percent Volatile: No data.
Autoignition Pt: No data.

10. Stability and Reactivity

Stability: Unstable [ ] Stable [ X ]

Incompatibility - Materials To Avoid: Alkali metals, Strong oxidizing agents, Ammonia, Peroxides, isocyanates, aliphatic amines, caustics, Acid anhydrides, Aluminum, Halogenated compounds, Acids.

Hazardous Decomposition or Byproducts: Other decomposition products: No data available. In the event of fire: see section 5.
Possibility of Hazardous Reactions: Will occur [ ] Will not occur [ X ]
Conditions To Avoid - Hazardous Reactions: Vapors may form explosive mixture with air.

11. Toxicological Information

Toxicological Information: Germ cell mutagenicity: No data available.
Reproductive toxicity. Aspiration hazard:
Irritation or Corrosion: Skin corrosion/irritation. No data available.
Serious eye damage/eye irritation: Provide adequate ventilation.
Result: Eyes - rabbit -
Result: Eye irritation - 24 h.
Sensitization: No data available.

Chronic Toxicological Effects:
Specific target organ toxicity - single exposure: No data available.
Specific target organ toxicity - repeated exposure: Inhalation. Oral. May cause drowsiness or dizziness.

Carcinogenicity/Other Information:
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
CAS# 107-21-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
13. Disposal Considerations

Waste Disposal Method: Product:
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.
RCRA U-Series: None listed.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Ethanol [or] Ethyl alcohol [or] Ethanol solutions [or] Ethyl alcohol solutions.
DOT Hazard Class: 3 FLAMMABLE LIQUID
UN/NA Number: UN1170 Packing Group: III

LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: Not Regulated.

15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>S. 302 (EHS)</th>
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<td>No</td>
</tr>
<tr>
<td>107-21-1</td>
<td>Ethylene glycol</td>
<td>No</td>
<td>Yes 5000 LB</td>
<td>Yes</td>
</tr>
<tr>
<td>67-63-0</td>
<td>Isopropyl alcohol</td>
<td>No</td>
<td>No</td>
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This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

- [X] Yes [ ] No Acute (immediate) Health Hazard
- [ ] Yes [X] No Chronic (delayed) Health Hazard
- [X] Yes [ ] No Fire Hazard
- [ ] Yes [X] No Sudden Release of Pressure Hazard
- [ ] Yes [X] No Reactive Hazard

GHS format
16. Other Information

Revision Date:

Additional Information About No data available.

This Product:

Company Policy or

Disclaimer:

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