LYMAN PRODUCTS
SAFETY DATA SHEET


Date Issued: 7/27/15
Date Revised: 5/16/19
Revision Number: Rev 1

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

1.1 Product Identifier
   Trade Name: Butch’s Black Powder Bore Shine
   Product Number: 02949

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against
   Product Use: Rifle Cleaner
   Restrictions on Use: None known

1.3 Details of the Supplier of the Safety Data Sheet
   Manufacturer: Lyman Products
   475 Smith Street
   Middletown, CT 06457 USA
   Information Phone Number: (860) 632-2020
   E-mail

1.4 Emergency Telephone Number
   Emergency Spill Information
   For Hazardous Materials [or Dangerous Goods] Incident
   Spill, Leak, Fire, Exposure, or Accident
   Call ChemTel Inc. Day or Night
   Within the USA and Canada: 1-800-255-3924 or
   Outside the USA at +1-813-248-0585 (collect calls accepted)
   Shipments within: Australia – 1-300-954-538, Brazil 0-800-591-6042, China 400-120-0751, India 000-800-099-0731
   Reference Contract Number: MIS3953100

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture


   GHS/CLP (1272/2008) Classification: Eye Irritant Category 2 (H319), Toxic to Reproduction Category 1B (H360)

2.2 Label Elements
   Danger!
   Contains: N-Methylpyrrolidone

<table>
<thead>
<tr>
<th>Hazard Statements</th>
<th>Precautionary Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>H319 Causes serious eye irritation</td>
<td>P201 Obtain special instructions before use.</td>
</tr>
<tr>
<td>H360 May damage fertility or the unborn child</td>
<td>P202 Do not handle until all safety precautions have been</td>
</tr>
</tbody>
</table>
read and understood.
P264 Wash thoroughly after handling.
P280 Wear protective gloves, clothing and eye protection.
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 attention.
P308+P313 IF exposed or concerned: Get medical attention.
P405 Store locked up.
P501 Dispose of contents and container in accordance with local, regional and national regulations.

2.3 Other Hazards: None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>EINECS#</th>
<th>GHS/CLP Classification</th>
<th>% w/w</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-hazardous Ingredients</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>Not Hazardous</td>
<td>Balance</td>
</tr>
<tr>
<td>Glycol Ether DB</td>
<td>112-34-5</td>
<td>203-961-6</td>
<td>Eye Irritant Category 2 (H319)</td>
<td>4-7</td>
</tr>
<tr>
<td>N-Methylpyrrolidone</td>
<td>872-50-4</td>
<td>212-828-1</td>
<td>Skin Irritant Category 2 (H315)</td>
<td>4-7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irritant Category 2 (H319)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Toxic To Reproduction Category 1B (H360)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Specific Target Organ Toxicity – Single Exposure Category 3 (H335)</td>
<td></td>
</tr>
</tbody>
</table>

The exact percentage and composition is a trade secret

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

Eye: Flush thoroughly with water for at least 15 minutes. Get medical attention if irritation occurs and persists.
Skin: No first aid should be needed. If irritation occurs, wash contact area with soap and water. Get medical attention if irritation or symptoms of exposure develop.
Inhalation: No first aid should be needed. If irritation occurs and persists, get medical attention.
Ingestion: No harmful effects are expected. If symptoms occur, get medical attention.

4.2 Most Important symptoms and effects, both acute and delayed: May cause serious eye irritation. May cause skin and respiratory irritation. Prolonged exposure to this product may damage fertility and the unborn child.

4.3 Indication of any immediate medical attention and special treatment needed: Immediate first aid should not be needed.

SECTION 5: FIRE AND EXPLOSION DATA

5.1 Extinguishing Media: Use water fog, alcohol foam or carbon dioxide.
5.2 Special Hazards Arising from the Substance or Mixture
   Unusual Fire and Explosion Hazards: None known.
   Combustion Products: Hazardous decomposition may yield oxides of carbon and nitrogen.

5.3 Advice for Fire-Fighters:
   Special Fire Fighting Procedures: Wear an approved, positive pressure, self-contained breathing apparatus and full protective clothing for all fires involving chemicals.

SECTION 6: ACCIDENTAL RELEASE MEASURES

2 of 6
6.1 Personal Precautions, Protective Equipment and Emergency Procedures:
Avoid contact with the eyes and prolonged skin contact. Avoid inhalation of mists or vapors. Ventilate the area. Wear appropriate protective clothing. Aqueous solutions may cause surfaces to be extremely slippery and cause a slip hazard.

6.2 Environmental Precautions:
Avoid release to the environment. Report spills and releases as required to appropriate authorities.

6.3 Methods and Material for Containment and Cleaning Up:
Soak up spill with absorbent material. Place residues in a suitable container. For large spills, reclaim into recovery or salvage drums or tank truck for proper disposal. Rinse spill area with water. Prevent spill from entering sewers and water courses. Do not contaminate surface water. Report releases as required by local, state and federal authorities.

6.4 Reference to Other Sections: Refer to Section 8 for personal protective equipment and Section 13 for disposal information.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling: Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Avoid breathing vapors or mist. Keep containers closed when not in use. Ensure all containers are labeled.

Do not reuse containers. Empty containers retain product residues and contaminants which can be hazardous. Follow all SDS precautions when handling empty containers.

7.2 Conditions for Safe Storage, Including any Incompatibilities: Store in a cool, well-ventilated area away from heat and incompatible materials.

7.3 Specific end use(s): None specified

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters: Refer to country-specific legislation for specific requirements where not listed below.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-hazardous Ingredients</td>
<td>None Established</td>
</tr>
<tr>
<td>Glycol Ether DB</td>
<td>10 ppm TWA ACGIH TLV (inhalable fraction and vapor)</td>
</tr>
<tr>
<td></td>
<td>10 ppm TWA DFG MAK (inhalable fraction and vapor), 15 ppm STEL (inhalable fraction and vapor)</td>
</tr>
<tr>
<td></td>
<td>10 ppm TWA UK WEL, 15 ppm STEL</td>
</tr>
<tr>
<td></td>
<td>10 ppm TWA EU OEL, 15 ppm STEL</td>
</tr>
<tr>
<td>N-Methylpyrrolidone</td>
<td>20 ppm TWA DFG MAK (inhalable fraction and vapor), 40 ppm STEL (inhalable fraction and vapor)</td>
</tr>
<tr>
<td></td>
<td>25 ppm TWA UK WEL, 75 ppm STEL</td>
</tr>
<tr>
<td></td>
<td>10 ppm TWA EU OEL, 20 ppm STEL</td>
</tr>
</tbody>
</table>

8.2 Exposure Controls:
Appropriate Engineering Controls: General exhaust ventilation should be adequate to maintain exposures below occupational exposure limits.
Respiratory Protection: None required for normal use. If needed, an approved dust/mist/organic vapor respirator may be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.
Skin Protection: Impervious gloves are recommended if needed to avoid prolonged contact.
Eye Protection: Chemical safety goggles recommended.
Other Protective Equipment: None should be needed under normal use conditions.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Vapor Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear, colorless liquid</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
Odor: Odorless. Specific Gravity: 0.99 - 1.01 at 25.0 C (77.0 F)
Odor Threshold: No data available Solubility: No data available
pH: 7.0-9.0 Octanol/Water Partition Coefficient: No data available
Melting Point/Freezing Point: No data available Autoignition Temperature: No data available
Boiling Point: Not applicable Decomposition Temperature: No data available
Flash Point: > 200.00 F (93.3 C) Method Used: Pensky-Marten Closed Cup Viscosity: No data available
Evaporation Rate: Not applicable Explosive Properties: No data available
Flammable Limits: LEL: Not applicable Oxidizing Properties: Not an oxidizer
UEL: Not applicable
Vapor Pressure: No data available Flammability (solid, gas): Not flammable

9.2 Other Information: None available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: Not reactive under regular storage and handling conditions.
10.2 Chemical Stability: Stable under regular storage and handling conditions.
10.3 Possibility of Hazardous Reactions: None known.
10.4 Conditions to Avoid: Avoid high temperatures.
10.5 Incompatible Materials: Strong oxidizing, acidic and alkali materials.
10.6 Hazardous Decomposition Products: Hazardous decomposition may yield oxides of carbon and nitrogen.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:
Potential Health Effects:
Eye Contact: May cause serious eye irritation, redness and tearing.
Skin Contact: May cause irritation with prolonged or repeated exposure.
Inhalation: Inhalation may cause slight nose and throat irritation.
Ingestion: Not expected to be harmful. Ingestion of large amounts may cause gastrointestinal distress.

Acute Toxicity Values:
Non-hazardous Ingredients: No data available.
Glycol Ether DB: Oral mouse LD50: 1470-3920 mg/kg, dermal rabbit LD50: 2764 mg/kg
N-Methylpyrrolidone: Oral rat LD50: 4150 mg/kg, inhalation rat LC50 > 5.1 mg/L, dermal rat LD50 > 5000 mg/kg

Skin corrosion/irritation: n-Methyl-2-pyrrolidone: Slightly irritating on rabbit skin.

Eye damage/irritation: This product is classified as a serious eye irritant. n-Methyl-2-pyrrolidone: Irritating to rabbit eyes.

Respiratory Irritation: This product is not classified as a respiratory irritant.

Respiratory Sensitization: This product is not classified as a respiratory sensitizer.

Skin Sensitization: n-Methyl-2-pyrrolidone: Non-sensitizing in guinea pig studies and human patch tests.


Carcinogenicity: None of the components of this product present at 0.1% or greater are listed as carcinogens by OSHA, IARC, NTP, ACGIH and the EU CLP.
Reproductive Toxicity: n-Methyl-2-pyrrolidone: Developmental toxicity was seen in rats including increased resorptions and skeletal abnormalities in a dermal study. NOAEL 237 mg/kg/day.

Aspiration Hazard: No data available for mixture. Components do not present an aspiration hazard.

Specific Target Organ Toxicity:
Single Exposure: No data available
Repeat Exposure: n-Methyl-2-pyrrolidone: Liver effects were evident in an oral study with mice at 2500 and 7500 ppm. At 1000 ppm, no effects were seen.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity
Glycol Ether DB: Lepomis macrochirus LC50: 1300 mg/L/96hr
N-Methylpyrrolidone: Oncorhynchus mykiss LC50 > 500 mg/L/96hr

This product is not expected to be hazardous to the environment.

12.3 Bioaccumulative Potential: No data available.

12.4 Mobility in Soil: No data available.

12.5 Results of PBT and vPvB Assessment: None of the components are PBT or vPvB

12.6 Other Adverse Effects: None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods:
Dispose in accordance with all local, state and national regulations.

SECTION 14: TRANSPORTATION INFORMATION

<table>
<thead>
<tr>
<th>14.1 UN Number</th>
<th>14.2 UN Proper Shipping Name</th>
<th>14.3 Hazard Class(s)</th>
<th>14.4 Packing Group</th>
<th>14.5 Environmental Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>US DOT</td>
<td>None</td>
<td>Not regulated</td>
<td>N/A</td>
<td>None</td>
</tr>
<tr>
<td>Canadian TDG</td>
<td>None</td>
<td>Not regulated</td>
<td>N/A</td>
<td>None</td>
</tr>
<tr>
<td>EU ADR/RID</td>
<td>None</td>
<td>Not regulated</td>
<td>N/A</td>
<td>None</td>
</tr>
<tr>
<td>IMDG</td>
<td>None</td>
<td>Not regulated</td>
<td>N/A</td>
<td>None</td>
</tr>
<tr>
<td>IATA/ICAO</td>
<td>None</td>
<td>Not regulated</td>
<td>N/A</td>
<td>None</td>
</tr>
</tbody>
</table>

14.6 Special Precautions for User: Not applicable

14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

SECTION 15: REGULATORY INFORMATION

15.1 Safety, Health and Environment Regulations/Legislation Specific for the Substance or Mixture:

U.S. FEDERAL REGULATIONS:

CERCLA 103 Reportable Quantity: This product is not subject to reporting under CERCLA. Some states have more stringent reporting requirements. Report all spills in accordance with local, state, and federal regulations.
SARA TITLE III:

Hazard Category for Section 311/312: Acute Health, Chronic Health

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: N-Methylpyrrolidone CAS# 872-50-4 4-7%

Section 302 Extremely Hazardous Substances (TPQ): None

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on TSCA.

STATE REGULATIONS:

California Proposition 65: This product contains the following substances known to the State of California to cause cancer, birth defects or other reproductive harm: N-Methylpyrrolidone CAS# 872-50-4 4-7%

INTERNATIONAL REGULATIONS:

Canadian Environmental Protection Act: All of the components are listed on the Canadian Domestic Substances List.

European Union: All of the components are listed on the European Inventory of New and Existing Chemical Substances (EINECS) inventory.

Australia: All of the ingredients of this product are listed on the Australian Inventory of Chemical Substances (AICS).

China: All of the ingredients of this product are listed on the Inventory of Existing Chemical Substance in China (IECSC).

Korea: All of the components of this product are listed on the Korean Existing Chemical List (KECL).

Japan: All of the components of this product are listed on the Japanese Existing and New Chemical Substances List (ENCS).

New Zealand: One or more of the components of this product are not listed on the New Zealand Inventory of Chemicals (NZIoC).

Phillypines: All of the components of this product are listed on the Philippine Inventory of Chemicals and Chemical Substances (PICCS).

German WGK: WGK 1

REACH: n-Methyl-2-pyrroldone is a substance of very high concern.

SECTION 16: OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS Ratings:</th>
<th>Health - 2</th>
<th>Flammability - 1</th>
<th>Physical Hazard - 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA Ratings:</td>
<td>Health - 2*</td>
<td>Flammability - 1</td>
<td>Stability - 0</td>
</tr>
</tbody>
</table>

Chronic Health Hazard

Supersedes: None

Date Updated: 7/27/15

Revision Summary: New document.

GHS Classification for Reference (See Sections 2 and 3):

None

============================================================================================================================

This above information is believed to be correct but does not propose to be all inclusive and shall be used only as a guide. Lyman Products shall not be held liable for any damage resulting from handling or from contact with the above product.