# MATERIAL SAFETY DATA SHEET

## SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: BUEHLER AUTOMET LAPPING OIL, VACUUM PUMP OIL,
IDENTIFICATION NUMBER: 20-2842, 60-3250-006, 60-3250-128
PRODUCT USE/CLASS: Lubricant/polishing oil

SUPPLIER:
BUEHLER, LTD
41 WAUKEGAN ROAD
LAKE BLUFF, IL 60044

EMERGENCY: 800-424-9300
INFORMATION: 847-295-6500
PREPARER: Technical Department, 847-295-6500
PREPARE DATE: 06/09/09, 09 June 2009

## SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>ITEM</th>
<th>CHEMICAL NAME</th>
<th>CAS NUMBER</th>
<th>WT/WT%</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Heavy petroleum distillate</td>
<td>64741-88-4</td>
<td>30.0-60.0</td>
</tr>
<tr>
<td>02</td>
<td>Hydrotreated heavy paraffinic distillate</td>
<td>64742-54-7</td>
<td>30.0-60.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ITEM</th>
<th>ACGIH TLV-TWA</th>
<th>ACGIH TLV-STEL</th>
<th>OSHA PEL-TWA</th>
<th>OSHA PEL – CEILING</th>
<th>COMPANY TLV-TWA</th>
<th>SKIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>5 mg/m³</td>
<td>N.E.</td>
<td>5 mg/m³</td>
<td>N.E.</td>
<td>N.E.</td>
<td>NO</td>
</tr>
<tr>
<td>02</td>
<td>5 mg/m³</td>
<td>N.E.</td>
<td>5 mg/m³</td>
<td>N.E.</td>
<td>5 mg/m³</td>
<td>NO</td>
</tr>
</tbody>
</table>

(SEE SECTION 16 FOR ABBREVIATION LEGEND)
SECTION 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Harmful if swallowed
ACUTE EFFECTS – EYE CONTACT: Mechanical irritant. Contact may cause tearing and redness.
ACUTE EFFECTS - SKIN CONTACT: Prolonged or repeated skin contact may cause irritation.
ACUTE EFFECTS – INHALATION: Vapors and/or aerosols formed at elevated temperatures can be irritating.
ACUTE EFFECTS - INGESTION: May cause nausea and vomiting. Harmful if swallowed. Liquid aspirated into lungs during vomiting may cause serious injury or death.
CHRONIC OVEREXPOSURE EFFECTS: Preexisting pulmonary and dermatological disorders may be aggravated by exposure to hazardous components.
OTHER INFORMATION: No information.
PRIMARY ROUTE(S) OF ENTRY: INHALATION, INGESTION,

SECTION 4 – FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.
SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persists.
INHALATION: If symptoms occur, remove to fresh air. Medical personnel may administer oxygen if breathing is difficult. Seek medical attention if symptoms persist.
INGESTION: If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

NOTES TO PHYSICIAN: No information.

SECTION 5 – FIRE FIGHTING MEASURES

FLASH POINT: 280 F (Cleveland Open Cup)
LOWER EXPLOSIVE LIMIT: N.A.
UPPER EXPLOSIVE LIMIT: N.A.
AUTOIGNITION TEMPERATURE: No data
EXTINGUISHING MEDIA: CO2, DRY CHEMICAL, FOAM
UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may rupture or explode (due to pressure build-up) when exposed to extreme heat. Irritating and/or toxic gases or fumes may be generated by thermal decomposition or combustion.
SPECIAL FIREFIGHTING PROCEDURES: Use NIOSH-approved self-contained breathing apparatus and full protective clothing. Use water to cool exposed containers. Water stream directed into fire may cause frothing with subsequent spread of flame.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Reclaim clean material. Keep spill away from drains and waterways. Absorb contaminated with inert filler. Contaminated material should be swept or shoveled into appropriate waste container and disposed of in accordance with applicable federal, state and local regulations.
SECTION 7 – HANDLING AND STORAGE
HANDLING: Wash hands before eating. Avoid prolonged or repeated contact with skin. DO NOT take internally.
FOR INDUSTRIAL USE ONLY
STORAGE: Store away from heat. KEEP OUT OF THE REACH OF CHILDREN

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION
ENGINEERING CONTROLS: General ventilation usually adequate
RESPIRATORY PROTECTION: None normally required under general ventilation. If exposure levels are unknown, if levels exceed TLV/PEL, or if effects occur, use NIOSH-approved dust/mist respirator in accordance with applicable health and safety regulations and manufacturer's recommendations.
SKIN PROTECTION: Clean clothing to cover skin. Cloth or synthetic gloves.
EYE PROTECTION: Safety glasses.
OTHER PROTECTIVE EQUIPMENT: Accessible eye wash and safety shower.
HYGIENIC PRACTICES: Follow good general industrial safety practices during use. DO NOT reuse empty containers without commercial clean or recondition. Follow all MSDS/label precautions even after container is emptied.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES
BOILING RANGE: N.A. VAPOR DENSITY: Is heavier than air
ODOR: Oily ODOR THRESHOLD: No data
APPEARANCE: Amber to green EVAPORATION RATE: Is slower than Butyl Acetate
SOLUBILITY IN H2O: Negligible
FREEZE POINT: No data SPECIFIC GRAVITY: 0.8766
VAPOR PRESSURE: No data pH @ 0.0%: N.A.
PHYSICAL STATE: Liquid VISCOSITY: Low
COEFFICIENT OF WATER/OIL DISTRIBUTION: No data
(SEE SECTION 16 FOR ABBREVIATION LEGEND)

SECTION 10 – STABILITY AND REACTIVITY
CONDITIONS TO AVOID: Prolonged exposure to heat.
INCOMPATIBILITY: No information.
HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.
STABILITY: This product is stable under normal storage conditions.

SECTION 11 – TOXICOLOGICAL PROPERTIES
No product or component toxicological information is available.

SECTION 12 – ECOLOGICAL INFORMATION
ECOLOGICAL TEST DATA: No information.
SECTION 13 – DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Review all current federal, state, and local regulations regarding health and disposal of used oils for appropriate disposal procedures. Product “as sold” is not considered a hazardous waste under Federal RCRA regulations. Landfilling of free liquid not recommended. Recovery or fuels blending recommended if regulations permit.

SECTION 14 – TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Not regulated
DOT TECHNICAL NAME: N.A.
DOT HAZARD CLASS: N.A. HAZARD SUBCLASS: N.A.
DOT UN/NA CLASS: N.A. PACKAGING GROUP: N.A.
RESP. GUIDE PAGE:

INTERNATIONAL SHIPPING NAME: Not regulated
INTERNATIONAL ID NUMBER: N.A.
IMDG CLASS (1°, 2°): N.A. IMDG PAGE NUMBER: N.A.
IMDG EMS: N.A. IATA CLASS (1°, 2°): N.A.

SECTION 15 – REGULATORY INFORMATION

CERCLA – SARA HAZARD CATEGORY: THIS PRODUCT HAS BEEN REVIEWED, AND IS CONSIDERED, UNDER APPLICABLE DEFINITIONS, TO MEET THE FOLLOWING CATEGORIES: NONE KNOWN
SARA SECTION 313: THIS PRODUCT CONTAINS THE FOLLOWING SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 AND 40 CFR PART 372:

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>CAS NUMBER</th>
<th>WT/WT % IS LESS THAN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No SARA Section 313 components exist in this product.

TOXIC SUBSTANCE CONTROL ACT: THE CHEMICAL SUBSTANCES IN THIS PRODUCT ARE ON THE TSCA SECTION 8 INVENTORY. THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF TSCA 12(B) IF EXPORTED FROM THE UNITED STATES:

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>CAS NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No components found.

NEW JERSEY RIGHT-TO-KNOW: THE FOLLOWING MATERIALS ARE NON-HAZARDOUS, BUT ARE AMONG THE TOP 5 COMPONENTS IN THIS PRODUCT:

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>CAS NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrotreated Petroleum Hydrocarbon</td>
<td>64742-46-7</td>
</tr>
<tr>
<td>Fatty ester</td>
<td>112-62-9</td>
</tr>
<tr>
<td>Fatty ester</td>
<td>8001-31-8</td>
</tr>
</tbody>
</table>

PENNSYLVANIA RIGHT-TO-KNOW: THE FOLLOWING NON-HAZARDOUS INGREDIENTS ARE PRESENT IN THE PRODUCT AT GREATER THAN 3%:

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Hydrotreated Petroleum Hydrocarbon</td>
<td>64742-46-7</td>
</tr>
</tbody>
</table>

CALIFORNIA PROPOSITION 65: No Proposition 65 chemicals known to exist in this product.

CANADIAN WHMIS: THIS MSDS HAS BEEN PREPARED IN COMPLIANCE WITH CONTROLLED PRODUCT REGULATIONS EXCEPT FOR USE OF THE 16 HEADINGS.
CANADIAN WHMIS CLASS: D2B
COMPONENT RCRA CLASSIFICATIONS: Not regulated
COMPONENT RCRA CODES: No information
CERCLA RQ VALUE (MINIMUM): None known
### SECTION 16 – OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS RATINGS</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH:</td>
<td>1</td>
<td>FLAMMABILITY: 1</td>
</tr>
</tbody>
</table>

**PREVIOUS MSDS REVISION DATE:** 05/12/03  
**REASON FOR REVISION:** Administrative change for new format.

**VOLATILE ORGANIC COMPOUNDS:** 215 grams/ltr

**LEGEND:**
- N.A. – NO INFORMATION
- N.E. – NOT ESTABLISHED
- N.D. – NOT DETERMINED

**ABBREVIATIONS: ACGIH = AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS; OSHA = OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION; TLV-TWA = THRESHOLD LIMIT VALUE – TIME WEIGHTED AVERAGE (8 HOURS); STEL = SHORT-TERM EXPOSURE LIMIT (15 MINUTES); C = CEILING VALUE; PEL = PERMISSIBLE EXPOSURE LIMIT**

**DISCLAIMER:** TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED IN THIS MSDS IS ACCURATE OR IS OBTAINED FROM SOURCES BELIEVED TO BE ACCURATE. HOWEVER, NO LIABILITY, EXPRESSED OR IMPLIED, IS ASSUMED FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED HEREIN. BUYER ASSUMES LIABILITY IN ITS USE OF THE MATERIAL.