



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product identifier KLONDIKE Moly Tac EP-2 3% Grease
Version # 01
Issue date 09-04-2014
CAS # Mixture
Product code Moly Tac HD EP-2 3%
Product use Multi-Purpose Grease
Manufacturer information KLONDIKE Lubricants Corporation
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Canada
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www.klondikelubricants.com
General Information 1-877-293-4691
Chemtrec (Within US) 1-800-424-9300
Chemtrec (International) 1-703-527-3887
Supplier Refer to Manufacturer

2. Hazards Identification

Emergency overview CAUTION
May cause mild skin and eye irritation. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Potential health effects
Routes of exposure Inhalation. Ingestion. Skin contact. Eye contact.
Eyes May cause mild eye irritation.
Skin Skin contact: May cause mild skin irritation on prolonged contact.
Skin absorption: Not expected to be absorbed through the skin.
Inhalation Inhalation of vapors/fumes generated by heating this product may cause respiratory irritation with throat discomfort, coughing or difficulty breathing.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Product may present an aspiration hazard, if ingested in large amounts.
Target organs Eyes. Respiratory system. Skin.
Chronic effects Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Most important symptoms/effects, acute and delayed May be mildly irritating to skin, eyes and respiratory system. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms may include stinging and tearing. Symptoms may include upper respiratory irritation, coughing, and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Potential environmental effects May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

| Non-hazardous components | CAS # | Percent |
|--------------------------|-----------|---------|
| Molybdenum Compounds | 1317-33-5 | 1 - 5 |

4. First Aid Measures

First aid procedures
Inhalation Move to fresh air. Oxygen or artificial respiration if needed. Call a physician if symptoms develop or persist.
Skin contact Wash off with soap and plenty of water. Get medical attention if irritation develops and persists.
Eye contact Flush with large amounts of water for 15 minutes. Get medical attention if irritation develops and persists.

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| Ingestion | Do not induce vomiting. Rinse mouth. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention if symptoms occur. |
| Notes to physician | In case of shortness of breath, give oxygen. Symptoms may be delayed. |
| General advice | In case of shortness of breath, give oxygen. If you feel unwell, seek medical advice (show the label where possible). Get medical attention if symptoms occur. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Keep victim under observation. Keep victim warm. |

5. Fire Fighting Measures

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| Flammable properties | Not flammable by WHMIS criteria. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. |
| Extinguishing media | |
| Suitable extinguishing media | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). |
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as this will spread the fire. |
| Protection of firefighters | |
| Protective equipment for firefighters | Firefighters should wear full protective clothing including self contained breathing apparatus. |
| Fire fighting equipment/instructions | Evacuate area and fight fire from a safe distance. Ventilate the contaminated area. Remove all sources of ignition. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray. Prevent fire extinguishing water from contaminating surface water or the ground water system. |
| Explosion data | |
| Sensitivity to static discharge | Not expected to be sensitive to static discharge. |
| Sensitivity to mechanical impact | Not expected to be sensitive to mechanical impact. |
| Hazardous combustion products | Carbon oxides. |

6. Accidental Release Measures

| | |
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| Personal precautions | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the MSDS. |
| Environmental precautions | Do not contaminate water. |
| Methods and materials for containment and cleaning up | <p>The product is immiscible with water and will spread on the water surface.</p> <p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.</p> <p>Small Spills: Absorb spillage with non-combustible, absorbent material. Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. For waste disposal, see section 13 of the MSDS. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.</p> |
| Other information | Clean up in accordance with all applicable regulations. |

7. Handling and Storage

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| Handling | Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Avoid inhalation of vapors and spray mists. Avoid contact with eyes, skin, and clothing. When using do not eat or drink. Use only outdoors or in a well-ventilated area. Do not use in areas without adequate ventilation. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wear personal protective equipment. Wash thoroughly after handling. Avoid release to the environment. |
| Storage | Store locked up. Keep away from heat, sparks and open flame. Store in tightly closed original container in a dry, cool and well-ventilated place. Keep container tightly closed. Store away from incompatible materials (see Section 10 of the MSDS). Keep away from food, drink and animal feedingstuffs. Use care in handling/storage. |

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

| Components | Type | Value | Form |
|---|------|----------|----------------------|
| Molybdenum Compounds (CAS 1317-33-5) | TWA | 3 mg/m3 | Respirable fraction. |
| | | 10 mg/m3 | Inhalable fraction. |

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Components | Type | Value | Form |
|---|------|----------|-------------|
| Molybdenum Compounds (CAS 1317-33-5) | PEL | 15 mg/m3 | Total dust. |

Biological limit values

No biological exposure limits noted for the ingredient(s).

Engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Wear appropriate chemical resistant clothing.

Respiratory protection

Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Seek advice from respiratory protection specialists.

Hand protection

Wear protective gloves. Advice should be sought from glove suppliers.

9. Physical & Chemical Properties

Appearance

Physical state

Liquid.

Form

Semi-fluid.

Color

Grey.

Odor

Mild petroleum odor.

Odor threshold

Not available.

pH

Not available.

Vapor pressure

< 0.01 mm Hg

Vapor density

> 5

Boiling point

> 300 °C (572 °F)

Melting point/Freezing point

Not available.

Solubility (water)

Not Soluble

Specific gravity

0.96

Relative density

Not available.

Flash point

> 200.0 °C (392 °F)

Flammability limits in air, upper, % by volume

Not available.

Flammability limits in air, lower, % by volume

Not available.

Auto-ignition temperature

Not available.

VOC

Nil

Evaporation rate

Not available.

Viscosity

336 cSt

Partition coefficient (n-octanol/water)

Not available.

10. Chemical Stability & Reactivity Information

Chemical stability

Material is stable under normal conditions.

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| Conditions to avoid | Avoid temperatures exceeding the flash point. Contact with incompatible materials. Do not use in areas without adequate ventilation. |
| Incompatible materials | Strong oxidizing agents. |
| Hazardous decomposition products | None known, refer to hazardous combustion products in Section 5. |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. |

11. Toxicological Information

| Toxicological data | | |
|---|---|---------------------------|
| Components | Species | Test Results |
| Molybdenum Compounds (CAS 1317-33-5) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | > 2000 mg/kg |
| <i>Inhalation</i> | | |
| LC50 | Rat | 2.82 mg/l, 4 hours (Dust) |
| <i>Oral</i> | | |
| LD50 | Rat | > 2000 mg/kg |
| Acute effects | May cause mild irritation to skin, eyes and respiratory system. May cause irritation of the gastrointestinal tract. | |
| Sensitization | Not expected to be a skin or respiratory sensitizer. | |
| Chronic effects | Prolonged or repeated contact may cause drying, cracking and defatting of the skin. | |
| Carcinogenicity | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. | |
| Skin corrosion/irritation | May be irritating to the skin. | |
| Serious eye damage/irritation | May be irritating to eyes. | |
| Mutagenicity | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. | |
| Reproductive effects | This product is not expected to cause reproductive or developmental effects. | |
| Teratogenicity | This product is not expected to be a teratogen. | |
| Most important symptoms/effects, acute and delayed | May be mildly irritating to skin, eyes and respiratory system. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms may include stinging and tearing. Symptoms may include upper respiratory irritation, coughing, and breathing difficulties. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. | |
| Synergistic materials | Not applicable. | |

12. Ecological Information

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|--|---|
| Ecotoxicological data | No ecotoxicity data noted for the ingredient(s). |
| Ecotoxicity | Contains a substance which causes risk of hazardous effects to the environment. |
| Environmental effects | An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. |
| Aquatic toxicity | Not available. |
| Persistence and degradability | Not available. |
| Mobility in environmental media | The product is immiscible with water and will spread on the water surface. |

13. Disposal Considerations

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| Disposal instructions | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations. |
| Waste from residues / unused products | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). |
| Contaminated packaging | Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. |

14. Transport Information

TDG

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory Information

Canadian regulations

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

WHMIS status

Non-controlled

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other Information

HMIS® ratings

Health: 1
Flammability: 1
Physical hazard: 0

NFPA ratings

Health: 0
Flammability: 1
Instability: 0

Disclaimer

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Bibliography

Not available.

Legend to abbreviations and acronyms used in the SDS

Not available.