2 Hazard(s) Identification

· Classification of the substance or mixture

    GHS07

    Skin Irrit. 2  H315  Causes skin irritation.
    Eye Irrit. 2A H319  Causes serious eye irritation.
    STOT SE 3 H335 May cause respiratory irritation.
    Aquatic Acute 3 H402 Harmful to aquatic life.
    Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

· Label elements

    GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

    Hazard pictograms

    GHS07

· Signal word Warning

· Hazard-determining components of labeling:
Asphaltic Resin

· Hazard statements
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
Harmful to aquatic life.
Harmful to aquatic life with long lasting effects.

· Precautionary statements
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Use only in a well-ventilated area.
Avoid release to the environment.
Wear protective gloves / eye protection / face protection.
If on skin: Wash with plenty of water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

(Contd. on page 2)
Call a poison center/doctor if you feel unwell.
Specific treatment (see on this label).
Take off contaminated clothing and wash it before reuse.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:
- NFPA ratings (scale 0 - 4)
  
  Health = 2
  Fire = 1
  Reactivity = 0
- HMIS-ratings (scale 0 - 4)
  
  HEALTH 2
  FIRE 1
  REACTIVITY 0

Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:

<table>
<thead>
<tr>
<th>Chemical Characterization</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8052-42-4 Asphaltic Resin</td>
<td>10-30%</td>
</tr>
<tr>
<td>1317-33-5 molybdenum disulphide</td>
<td>0.1-1%</td>
</tr>
<tr>
<td>68457-79-4 Zinc Dialkylthiophosphate</td>
<td>0.1-1%</td>
</tr>
</tbody>
</table>

4 First-aid measures

- Description of first aid measures
- General information: Immediately remove any clothing soiled by the product.
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
  - Most important symptoms and effects, both acute and delayed No further relevant information available.
  - Indication of any immediate medical attention and special treatment needed
    No further relevant information available.
5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures: Not required.
- Environmental precautions:
  - Do not allow product to reach sewage system or any water course.
  - Inform respective authorities in case of seepage into water course or sewage system.
  - Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.
- 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.
- Protective Action Criteria for Chemicals

  - **PAC-1:**
    - 8052-42-4 Asphalitic Resin 30 mg/m³
    - 1317-33-5 molybdenum disulphide 50 mg/m³
  - **PAC-2:**
    - 8052-42-4 Asphalitic Resin 330 mg/m³
    - 1317-33-5 molybdenum disulphide 260 mg/m³
  - **PAC-3:**
    - 8052-42-4 Asphalitic Resin 2,000 mg/m³
    - 1317-33-5 molybdenum disulphide 1,600 mg/m³

7 Handling and storage

- Handling:
- Precautions for safe handling: Ensure good ventilation/exhaustion at the workplace.
- Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities
- Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed.
- Specific end use(s) No further relevant information available.
8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

· Control parameters

· Ingredients with biological limit values:
  8052-42-4 Asphaltic Resin (10-30%)

<table>
<thead>
<tr>
<th>BEI</th>
<th>Medium: urine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time: end of shift at end of workweek</td>
<td></td>
</tr>
<tr>
<td>Parameter: 1-Hydroxypryrene with hydrolysis (nonquantitative)</td>
<td></td>
</tr>
</tbody>
</table>

· Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls
  · Personal protective equipment:
    · General protective and hygienic measures:
      Keep away from foodstuffs, beverages and feed.
      Immediately remove all soiled and contaminated clothing.
      Wash hands before breaks and at the end of work.
      Avoid contact with the eyes and skin.
    · Breathing equipment:
      In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
  · Protection of hands:

  Protective gloves

  The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
  Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

  · Material of gloves
  The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

  · Penetration time of glove material
  The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

  · Eye protection:

  Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties
  · General Information
    · Appearance:
      Form: Semi-Solid
### Trade name: Moly EO (1% Moly) Grease

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Color:</strong></td>
<td>Grey</td>
</tr>
<tr>
<td><strong>Odor:</strong></td>
<td>Petroleum-like</td>
</tr>
<tr>
<td><strong>Odor threshold:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>pH-value:</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range:</td>
<td>Undetermined.</td>
</tr>
<tr>
<td>Boiling point/Boiling range:</td>
<td>370 °C (698 °F)</td>
</tr>
<tr>
<td><strong>Flash point:</strong></td>
<td>255 °C (491 °F)</td>
</tr>
<tr>
<td><strong>Flammability (solid, gaseous):</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Ignition temperature:</strong></td>
<td>&gt;315 °C (&gt;599 °F)</td>
</tr>
<tr>
<td><strong>Decomposition temperature:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Auto igniting:</strong></td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td><strong>Danger of explosion:</strong></td>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td><strong>Explosion limits:</strong></td>
<td></td>
</tr>
<tr>
<td>Lower:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Upper:</td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Vapor pressure:</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Density at 20 °C (68 °F):</strong></td>
<td>0.94894 g/cm³ (7.9189 lbs/gal)</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with Water:</strong></td>
<td>Insoluble.</td>
</tr>
<tr>
<td><strong>Partition coefficient (n-octanol/water):</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Viscosity:</strong></td>
<td></td>
</tr>
<tr>
<td>Dynamic:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Kinematic:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Solvent content:</strong></td>
<td>0.00 %</td>
</tr>
<tr>
<td>VOC content:</td>
<td>0.00 g/l / 0.00 lb/gal</td>
</tr>
<tr>
<td>Solids content:</td>
<td>6.9 %</td>
</tr>
<tr>
<td><strong>Other information</strong></td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.
**11 Toxicological information**

- Information on toxicological effects
  - Acute toxicity:
    - LD/LC50 values that are relevant for classification:
      - **8052-42-4 Asphalitic Resin**
        - Oral LD50 >5,000 mg/kg (rat)
        - Dermal LD50 >2,000 mg/kg (rabbit)
        - Inhalative LC50/4 h 23.6 mg/l (rat)
  - Primary irritant effect:
    - on the skin: Irritant to skin and mucous membranes.
    - on the eye: Irritating effect.
    - Sensitization: No sensitizing effects known.
  - Additional toxicological information:
    The product shows the following dangers according to internally approved calculation methods for preparations:
    - Irritant
- Carcinogenic categories
  - OSHA-Ca (Occupational Safety & Health Administration): (Substances not listed)
    - None of the ingredients is listed.

**12 Ecological information**

- Toxicity
  - Aquatic toxicity:
    - **8052-42-4 Asphalitic Resin**
      - LC50 >1,000 mg/L (Fish)
    - Persistence and degradability: No further relevant information available.
    - Behavior in environmental systems:
      - Bioaccumulative potential: No further relevant information available.
    - Mobility in soil: No further relevant information available.
    - Ecotoxic effects:
      - Remark: Harmful to fish
    - Additional ecological information:
      - General notes:
        - Water hazard class 1 (Self-assessment): slightly hazardous for water
        - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
        - Harmful to aquatic organisms
        - Results of PBT and vPvB assessment
          - PBT: Not applicable.
          - vPvB: Not applicable.
    - Other adverse effects: No further relevant information available.

**13 Disposal considerations**

- Waste treatment methods
  - Recommendation:
    - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
### 14 Transport information

| · UN-Number | not regulated |
| · DOT, ADN, IMDG, IATA | not regulated |
| · UN proper shipping name | not regulated |
| · DOT, ADN, IMDG, IATA | not regulated |
| · Transport hazard class(es) | not regulated |
| · DOT, ADN, IMDG, IATA | not regulated |
| · Class | not regulated |
| · Packing group | not regulated |
| · DOT, IMDG, IATA | not regulated |
| · Environmental hazards: | No |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | not regulated |

### 15 Regulatory information

| · Safety, health and environmental regulations/legislation specific for the substance or mixture |
| · Sara |
| · Section 355 (extremely hazardous substances): |
| None of the ingredients is listed. |
| · Section 313 (Specific toxic chemical listings): |
| 68457-79-4 Zinc Dialkylthiophosphate | 0.1-1% |
| · TSCA (Toxic Substances Control Act): |
| All ingredients are listed. |
| · TSCA new (21st Century Act) |
| Asphaltic Resin | ACTIVE/EXEMPT |
| molybdenum disulphide | ACTIVE/EXEMPT |
| Zinc Dialkylthiophosphate | ACTIVE/EXEMPT |
| · Proposition 65 |
| · Chemicals known to cause cancer: |
| None of the ingredients is listed. |
| · Chemicals known to cause reproductive toxicity for females: |
| None of the ingredients is listed. |
| · Chemicals known to cause reproductive toxicity for males: |
| None of the ingredients is listed. |
Trade name: Moly EO (1% Moly) Grease

- **Chemicals known to cause developmental toxicity:**
  None of the ingredients is listed.

- **Carcinogenic categories**

- **TLV (Threshold Limit Value established by ACGIH)**
  8052-42-4 Asphaltic Resin

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  None of the ingredients is listed.

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**
  ![GHS07]

- **Signal word** Warning

- **Hazard-determining components of labeling:**
  Asphaltic Resin

- **Hazard statements**
  Causes skin irritation.
  Causes serious eye irritation.
  May cause respiratory irritation.
  Harmful to aquatic life.
  Harmful to aquatic life with long lasting effects.

- **Precautionary statements**
  Avoid breathing dust/fume/gas/mist/vapors/spray
  Wash thoroughly after handling.
  Use only in a well-ventilated area.
  Avoid release to the environment.
  Wear protective gloves / eye protection / face protection.
  If on skin: Wash with plenty of water.
  IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  IF in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  Call a poison center/doctor if you feel unwell.
  Specific treatment (see on this label).
  Take off contaminated clothing and wash it before reuse.
  If skin irritation occurs: Get medical advice/attention.
  If eye irritation persists: Get medical advice/attention.
  Store in a well-ventilated place. Keep container tightly closed.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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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.

- **Department issuing SDS:** Technical Department
- **Contact:** Ms. McDaniel

(Contd. on page 9)
Trade name: Moly EO (1% Moly) Grease

- Date of preparation / last revision: 03/01/2019 / 9
- Abbreviations and acronyms:
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  ACGIH: American Conference of Governmental Industrial Hygienists
  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)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  VOC: Volatile Organic Compounds (USA, EU)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  NIOSH: National Institute for Occupational Safety
  OSHA: Occupational Safety & Health
  BEI: Biological Exposure Limit
  Skin Irrit. 2: Skin corrosion/irritation – Category 2
  Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
  STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
  Aquatic Acute 3: Hazardous to the aquatic environment - acute aquatic hazard – Category 3
  Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
- * Data compared to the previous version altered.