SAFETY DATA SHEET
MOLYKOTE(R) 1000 PASTE

SECTION 1. IDENTIFICATION

Product name: MOLYKOTE(R) 1000 PASTE
Product code: 000000000001444310

Manufacturer or supplier’s details
Company name of supplier: Dow Corning Corporation
Address: South Saginaw Road
Midland Michigan 48686
Telephone: (989) 496-6000
Emergency telephone: 24 Hour Emergency Telephone: (989) 496-5900
CHEMTREC: (800) 424-9300

Recommended use of the chemical and restrictions on use
Recommended use: Lubricants and lubricant additives

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200
Not a hazardous substance or mixture.

GHS label elements
Not a hazardous substance or mixture.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture
Chemical nature: Inorganic and organic compounds in mineral oil

Hazardous ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium fluoride</td>
<td>7789-75-5</td>
<td>&gt;= 18 - &lt;= 26</td>
</tr>
<tr>
<td>Distillates (petroleum), solvent-dewaxed heavy paraffinic</td>
<td>64742-65-0</td>
<td>&lt;= 21</td>
</tr>
<tr>
<td>Distillates (petroleum), solvent dewaxed light paraffinic; baseoil - unspecified</td>
<td>64742-56-9</td>
<td>&lt;= 21</td>
</tr>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>&gt;= 9 - &lt;= 13</td>
</tr>
<tr>
<td>Copper metal powder</td>
<td>7440-50-8</td>
<td>&gt;= 6 - &lt;= 9</td>
</tr>
<tr>
<td>Silicon dioxide</td>
<td>7631-86-9</td>
<td>&gt;= 1.9 - &lt;= 2.5</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES
If inhaled: If inhaled, remove to fresh air. Get medical attention if symptoms occur.

In case of skin contact: Wash with water and soap as a precaution. Get medical attention if symptoms occur.

In case of eye contact: Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.

If swallowed: If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed: None known.

Protection of first-aiders: No special precautions are necessary for first aid responders.

Notes to physician: Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media: None known.

Specific hazards during fire fighting: Exposure to combustion products may be a hazard to health.

Hazardous combustion products: Carbon oxides
Fluorine compounds
Metal oxides
Silicon oxides

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.
Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protection: Follow safe handling advice and personal protective
Equipment and emergency procedures

Environmental precautions:
- Discharge into the environment must be avoided.
- Prevent further leakage or spillage if safe to do so.
- Retain and dispose of contaminated wash water.
- Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up:
- Soak up with inert absorbent material.
- For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.
- Clean up remaining materials from spill with suitable absorbent.
- Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
- Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures:
- See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation:
- Use only with adequate ventilation.

Advice on safe handling:
- Handle in accordance with good industrial hygiene and safety practice.
  - Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage:
- Keep in properly labeled containers.
  - Store in accordance with the particular national regulations.

Materials to avoid:
- Do not store with the following product types:
  - Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium fluoride</td>
<td>7789-75-5</td>
<td>TWA</td>
<td>2.5 mg/m³ (Fluorine)</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>2.5 mg/m³ (Fluorine)</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>2.5 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td>Ingredients</td>
<td>CAS-No.</td>
<td>Control parameters</td>
<td>Biological specimen</td>
<td>Sampling time</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
<td>--------------------</td>
<td>---------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Distillates (petroleum), solvent- dewaxed heavy paraffinic</td>
<td>64742-65-0</td>
<td>TWA (Mist)</td>
<td>Fluorine</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Inhalable fraction)</td>
<td>5 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Mist)</td>
<td>5 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST (Mist)</td>
<td>10 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td>Distillates (petroleum), solvent dewaxed light paraffinic; baseoil - unspecified</td>
<td>64742-56-9</td>
<td>TWA (Mist)</td>
<td>Fluorine</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Inhalable fraction)</td>
<td>5 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Mist)</td>
<td>5 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST (Mist)</td>
<td>10 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>TWA (Respirable)</td>
<td>Fluorine</td>
<td>2.5 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable fraction)</td>
<td>2 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Dust)</td>
<td>15 Million particles per cubic foot</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td>Copper metal powder</td>
<td>7440-50-8</td>
<td>TWA (Dust and mist)</td>
<td>Copper</td>
<td>1 mg/m³ (Copper)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Fumes)</td>
<td>0.2 mg/m³ (Copper)</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Dust)</td>
<td>1 mg/m³ (Copper)</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Mist)</td>
<td>1 mg/m³ (Copper)</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (dusts and mists)</td>
<td>1 mg/m³ (Copper)</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Fumes)</td>
<td>0.1 mg/m³ (Copper)</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td>Silicon dioxide</td>
<td>7631-86-9</td>
<td>TWA (Dust)</td>
<td>Silica</td>
<td>20 Million particles per cubic foot (Silica)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Dust)</td>
<td>80 mg/m³ / %SiO₂ (Silica)</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>6 mg/m³ (Silica)</td>
<td>NIOSH REL</td>
</tr>
</tbody>
</table>

These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

Silicon dioxide

**Biological occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium fluoride</td>
<td>7789-75-5</td>
<td>Fluoride</td>
<td>Urine</td>
<td>Prior to</td>
<td>2 mg/l</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>
**Engineering measures**

Ensure adequate ventilation, especially in confined areas. Minimize workplace exposure concentrations. Dust formation may be relevant in the processing of this product. In addition to substance-specific OELs, general limitations of concentrations of particulates in the air at workplaces have to be considered in workplace risk assessment. Relevant limits include: OSHA PEL for Particulates Not Otherwise Regulated of 15 mg/m3 - total dust, 5 mg/m3 - respirable fraction; and ACGIH TWA for Particles (insoluble or poorly soluble) Not Otherwise Specified of 3 mg/m3 - respirable particles, 10 mg/m3 - inhalable particles.

**Personal protective equipment**

**Respiratory protection**

General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

**Hand protection**

Wash hands before breaks and at the end of workday.

**Eye protection**

Wear the following personal protective equipment:

- Safety glasses

**Skin and body protection**

Skin should be washed after contact.

**Hygiene measures**

Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use. These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may
require added precautions.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>paste</td>
</tr>
<tr>
<td>Color</td>
<td>brown</td>
</tr>
<tr>
<td>Odor</td>
<td>slight</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not classified as a flammability hazard</td>
</tr>
<tr>
<td>Self-ignition</td>
<td>The substance or mixture is not classified as pyrophoric. The substance or mixture is not classified as self heating.</td>
</tr>
<tr>
<td>Upper explosion limit / Upper flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit / Lower flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.26</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Water solubility</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Viscosity, dynamic</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
</tr>
</tbody>
</table>
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Oxidizing properties: The substance or mixture is not classified as oxidizing.

Molecular weight: No data available

Particle size: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Can react with strong oxidizing agents.

Conditions to avoid: None known.

Incompatible materials: Oxidizing agents

Hazardous decomposition products: No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Skin contact
Ingestion
Eye contact

Acute toxicity
Not classified based on available information.

Ingredients:

Calcium fluoride:
Acute oral toxicity: LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity: LC50 (Rat): > 5.07 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Distillates (petroleum), solvent-dewaxed heavy paraffinic:
Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute inhalation toxicity: LC50 (Rat): > 5.53 mg/l
Exposure time: 4 h
### Acute dermal toxicity

<table>
<thead>
<tr>
<th>Substance/Composition</th>
<th>LD50 (Rabbit): &gt; 5,000 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), solvent dewaxed light paraffinic; baseoil - unspecified</td>
<td></td>
</tr>
<tr>
<td>Graphite</td>
<td></td>
</tr>
<tr>
<td>Copper metal powder</td>
<td></td>
</tr>
</tbody>
</table>

Method: OECD Test Guideline 402

Remarks: Based on data from similar materials

### Acute inhalation toxicity

<table>
<thead>
<tr>
<th>Substance/Composition</th>
<th>LC50 (Rat): &gt; 5.53 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), solvent dewaxed light paraffinic; baseoil - unspecified</td>
<td>Exposure time: 4 h</td>
</tr>
<tr>
<td>Graphite</td>
<td></td>
</tr>
<tr>
<td>Copper metal powder</td>
<td></td>
</tr>
</tbody>
</table>

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Assessment: The substance or mixture has no acute inhalation toxicity

Remarks: Based on data from similar materials

### Acute oral toxicity

<table>
<thead>
<tr>
<th>Substance/Composition</th>
<th>LD50 (Rat): &gt; 5,000 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), solvent dewaxed light paraffinic; baseoil - unspecified</td>
<td></td>
</tr>
<tr>
<td>Graphite</td>
<td></td>
</tr>
<tr>
<td>Copper metal powder</td>
<td></td>
</tr>
</tbody>
</table>

Method: OECD Test Guideline 401

### Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Assessment: The substance or mixture has no acute inhalation toxicity

Remarks: Based on data from similar materials
Silicon dioxide:
Acute oral toxicity: LD50 (Rat): > 3,300 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Information taken from reference works and the literature.

Acute inhalation toxicity: LC50 (Rat): > 2.08 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Information taken from reference works and the literature.

Acute dermal toxicity: LD50 (Rabbit): > 5,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Information taken from reference works and the literature.

Skin corrosion/irritation
Not classified based on available information.

Ingredients:
Calcium fluoride:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Distillates (petroleum), solvent-dewaxed heavy paraffinic:
Species: Rabbit
Result: No skin irritation
Remarks: Based on data from similar materials

Distillates (petroleum), solvent dewaxed light paraffinic; baseoil - unspecified:
Species: Rabbit
Result: No skin irritation

Graphite:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Copper metal powder:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation
Silicon dioxide:
Result: No skin irritation
Remarks: Information taken from reference works and the literature.

Serious eye damage/eye irritation
Not classified based on available information.

Ingredients:

Calcium fluoride:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

Distillates (petroleum), solvent-dewaxed heavy paraffinic:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405
Remarks: Based on data from similar materials

Distillates (petroleum), solvent dewaxed light paraffinic; baseoil - unspecified:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

Graphite:
Species: Rabbit
Result: No eye irritation

Copper metal powder:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

Silicon dioxide:
Result: No eye irritation
Remarks: Information taken from reference works and the literature.

Respiratory or skin sensitization

Skin sensitization
Not classified based on available information.

Respiratory sensitization
Not classified based on available information.

Ingredients:

Calcium fluoride:
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: negative

Distillates (petroleum), solvent-dewaxed heavy paraffinic:
Test Type: Buehler Test
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative
Remarks: Based on data from similar materials

Distillates (petroleum), solvent dewaxed light paraffinic; baseoil - unspecified:
Test Type: Buehler Test
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

Graphite:
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Result: negative

Copper metal powder:
Test Type: Maximization Test
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

Silicon dioxide:
Assessment: Does not cause skin sensitization.

Test Type: Skin; test type not specified
Species: Guinea pig
Result: negative
Remarks: Information taken from reference works and the literature.

Germ cell mutagenicity
Not classified based on available information.

Ingredients:

Calcium fluoride:
Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Distillates (petroleum), solvent-dewaxed heavy paraffinic:
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Genotoxicity in vitro:
- Test Type: Bacterial reverse mutation assay (AMES)
- Method: OECD Test Guideline 471
- Result: negative
- Remarks: Based on data from similar materials

Genotoxicity in vivo:
- Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
- Species: Mouse
- Application Route: Intraperitoneal injection
- Method: OECD Test Guideline 474
- Result: negative
- Remarks: Based on data from similar materials

Distillates (petroleum), solvent dewaxed light paraffinic; baseoil - unspecified:
Genotoxicity in vitro:
- Test Type: Bacterial reverse mutation assay (AMES)
- Method: OECD Test Guideline 471
- Result: negative
- Remarks: Based on data from similar materials

Genotoxicity in vivo:
- Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
- Species: Mouse
- Application Route: Intraperitoneal injection
- Method: OECD Test Guideline 474
- Result: negative
- Remarks: Based on data from similar materials

Graphite:
Genotoxicity in vitro:
- Test Type: Bacterial reverse mutation assay (AMES)
- Result: negative

Genotoxicity in vivo:
- Application Route: Ingestion
- Result: negative
- Remarks: Based on data from reference works and the literature.

Copper metal powder:
Genotoxicity in vitro:
- Test Type: Bacterial reverse mutation assay (AMES)
- Method: OECD Test Guideline 471
- Result: negative

Genotoxicity in vivo:
- Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
- Species: Mouse
- Application Route: Ingestion
- Result: negative
- Remarks: Based on data from similar materials

Silicon dioxide:
Genotoxicity in vitro:
- Result: negative
- Remarks: Information taken from reference works and the literature.

Genotoxicity in vivo:
- Application Route: Ingestion
- Result: negative
- Remarks: Information taken from reference works and the literature.
Germ cell mutagenicity - Assessment
Animal testing did not show any mutagenic effects.

Carcinogenicity
Not classified based on available information.

Ingredients:

Calcium fluoride:
Species: Rat
Application Route: Ingestion
Exposure time: 99 weeks
Result: negative

Distillates (petroleum), solvent-dewaxed heavy paraffinic:
Species: Mouse
Application Route: Skin contact
Exposure time: 78 weeks
Method: OECD Test Guideline 451
Result: negative

Distillates (petroleum), solvent dewaxed light paraffinic; baseoil - unspecified:
Species: Mouse
Application Route: Skin contact
Exposure time: 78 weeks
Method: OECD Test Guideline 451
Result: negative
Remarks: Based on data from similar materials

IARC
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA
No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

NTP
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
Not classified based on available information.

Ingredients:

Calcium fluoride:
Effects on fertility: Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative
Effects on fetal development: Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Result: negative

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Effects on fertility: Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development: Test Type: Embryo-fetal development
Species: Rat
Application Route: Skin contact
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

Distillates (petroleum), solvent dewaxed light paraffinic; baseoil - unspecified:

Effects on fertility: Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development: Test Type: Embryo-fetal development
Species: Rat
Application Route: Skin contact
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

Graphite:

Effects on fertility: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Copper metal powder:

Effects on fertility: Test Type: Two-generation reproduction toxicity study
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MOLYKOTE(R) 1000 PASTE

Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 416
Result: negative

Effects on fetal development:
Test Type: Embryo-fetal development
Species: Rabbit
Application Route: Ingestion
Result: negative

STOT-single exposure
Not classified based on available information.

STOT-repeated exposure
Not classified based on available information.

Ingredients:

**Calcium fluoride:**
Routes of exposure: inhalation (dust/mist/fume)
Assessment: No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

**Copper metal powder:**
Routes of exposure: inhalation (dust/mist/fume)
Assessment: No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

Repeated dose toxicity

Ingredients:

**Calcium fluoride:**
Species: Rat
NOAEL: 7 mg/m³
Application Route: inhalation (dust/mist/fume)
Exposure time: 28 Days

**Distillates (petroleum), solvent-dewaxed heavy paraffinic:**
Species: Rabbit
NOAEL: 1,000 mg/kg
Application Route: Skin contact
Exposure time: 4 Weeks
Method: OECD Test Guideline 410
Remarks: Based on data from similar materials

Species: Rat
NOAEL: > 980 mg/m³
Application Route: inhalation (dust/mist/fume)
Exposure time: 4 Weeks
Remarks: Based on data from similar materials
Distillates (petroleum), solvent dewaxed light paraffinic; baseoil - unspecified:
Species: Rat
NOAEL: 1,000 mg/kg
Application Route: Skin contact
Exposure time: 4 Weeks
Method: OECD Test Guideline 410
Remarks: Based on data from similar materials

Species: Rat
NOAEL: > 980 mg/m³
Application Route: inhalation (dust/mist/fume)
Exposure time: 4 Weeks
Remarks: Based on data from similar materials

Graphite:
Species: Rat
NOAEL: 12 mg/m³
Application Route: inhalation (dust/mist/fume)
Exposure time: 28 Days
Method: OECD Test Guideline 412

Copper metal powder:
Species: Rat
NOAEL: >= 2 mg/m³
Application Route: inhalation (dust/mist/fume)
Exposure time: 28 Days

Aspiration toxicity
Not classified based on available information.

Ingredients:
Distillates (petroleum), solvent-dewaxed heavy paraffinic:
The substance or mixture is known to cause human aspiration toxicity hazards or has to be re-
garded as if it causes a human aspiration toxicity hazard.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:
Calcium fluoride:
Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 108 mg/l
                          Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 97 - 270 mg/l
                                                        Exposure time: 48 h
Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 122 mg/l
                          Exposure time: 96 h
Toxicity to fish (Chronic toxicity):

NOEC (Onchorhynchus mykiss (rainbow trout)): 4 mg/l
Exposure time: 21 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

NOEC (Daphnia magna (Water flea)): 8.9 mg/l
Exposure time: 21 d

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

Toxicity to fish:
LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates:
EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae:
EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
NOEC (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Toxicity to microorganisms:
NOEC: > 1.93 mg/l
Exposure time: 10 min
Method: DIN 38 412 Part 8
Remarks: Based on data from similar materials

Distillates (petroleum), solvent dewaxed light paraffinic; baseoil - unspecified:

Toxicity to fish:
LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates:
EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae:
EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
NOEC (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Toxicity to microorganisms: NOEC: > 1.93 mg/l
Exposure time: 10 min
Method: DIN 38 412 Part 8
Remarks: Based on data from similar materials

Graphite:
Toxicity to fish: LC50 (Danio rerio (zebra fish)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae: EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to microorganisms: EC50: > 1,012.5 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Copper metal powder:
Toxicity to fish: LC50: 8.1 µg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 0.792 mg/l
Exposure time: 48 h

Toxicity to algae: EC50 (Chlorella vulgaris (Fresh water algae)): 0.333 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity): 100

Toxicity to fish (Chronic toxicity): NOEC (Oncorhynchus mykiss (rainbow trout)): 1 µg/l

M-Factor (Chronic aquatic toxicity): 100

Persistence and degradability

Ingredients:
Distillates (petroleum), solvent-dewaxed heavy paraffinic:
Biodegradability: Result: Not readily biodegradable.
Biodegradation: 2 - 8 %
Exposure time: 28 d
Distillates (petroleum), solvent dewaxed light paraffinic; baseoil - unspecified:

Biodegradability

Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Resource Conservation and Recovery Act (RCRA)
This product has been evaluated for RCRA characteristics and does not meet the criteria of hazardous waste if discarded in its purchased form.

Waste from residues
Dispose of in accordance with local regulations.

Contaminated packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG
UN number: UN 3077
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (N-Tallow Alkyltrimethylenediamine Oleate, Zinc)
Class: 9
Packing group: III
Labels: 9

IATA-DGR
UN/ID No.: UN 3077
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (N-Tallow Alkyltrimethylenediamine Oleate, Zinc)
Class: 9
Packing group: III
Labels: Miscellaneous
Packing instruction (cargo aircraft): 956
Packing instruction (passen-
IMDG-Code
UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(N-Tallow Alkyltrimethylenediamine Oleate, Zinc)
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation

49 CFR
UN/ID/NA number : UN 3077
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.
(N-Tallow Alkyltrimethylenediamine Oleate, Zinc)
Class : 9
Packing group : III
Labels : CLASS 9
ERG Code : 171
Marine pollutant : yes(N-Tallow Alkyltrimethylenediamine Oleate, Zinc)
Remarks : Above applies only to containers over 119 gallons or 450 liters.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc</td>
<td>7440-66-6</td>
<td>1000</td>
<td>22727</td>
</tr>
<tr>
<td>Copper metal powder</td>
<td>7440-50-8</td>
<td>5000</td>
<td>64102</td>
</tr>
</tbody>
</table>

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity
This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Reporting Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper metal powder</td>
<td>7440-50-8</td>
<td>&gt;= 6 - &lt;= 9 %</td>
</tr>
<tr>
<td>Zinc</td>
<td>7440-66-6</td>
<td>&gt;= 4 - &lt;= 5 %</td>
</tr>
</tbody>
</table>
US State Regulations

Pennsylvania Right To Know

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium fluoride</td>
<td>7789-75-5</td>
</tr>
<tr>
<td>Distillates (petroleum), solvent dewaxed light paraffinic; baseoil - unspecified</td>
<td>64742-56-9</td>
</tr>
<tr>
<td>Distillates (petroleum), solvent-dewaxed heavy paraffinic</td>
<td>64742-65-0</td>
</tr>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
</tr>
<tr>
<td>Copper metal powder</td>
<td>7440-50-8</td>
</tr>
<tr>
<td>Polybutene</td>
<td>9003-29-6</td>
</tr>
<tr>
<td>Zinc</td>
<td>7440-66-6</td>
</tr>
<tr>
<td>Disodium sebacate</td>
<td>17265-14-4</td>
</tr>
<tr>
<td>Silicon dioxide</td>
<td>7631-86-9</td>
</tr>
</tbody>
</table>

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

California List of Hazardous Substances

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium fluoride</td>
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</tr>
<tr>
<td>Distillates (petroleum), solvent dewaxed light paraffinic; baseoil - unspecified</td>
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<td>7440-66-6</td>
</tr>
<tr>
<td>Silicon dioxide</td>
<td>7631-86-9</td>
</tr>
</tbody>
</table>

California Permissible Exposure Limits for Chemical Contaminants

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
</tr>
</thead>
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</tr>
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<tr>
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</tr>
<tr>
<td>Silicon dioxide</td>
<td>7631-86-9</td>
</tr>
</tbody>
</table>

The ingredients of this product are reported in the following inventories:

KECI : All ingredients listed, exempt or notified.

TCSI : All ingredients listed or exempt.

REACH : For purchases from Dow Corning EU legal entities, all ingredients are currently pre/registered or exempt under REACH. Please refer to section 1 for recommended uses. For purchases from non-EU Dow Corning legal entities with the intention to export into EEA please contact your DC representative/local office.

TSCA : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

AICS : All ingredients listed or exempt.

IECSC : All ingredients listed or exempt.
ENCS/ISHL: All components are listed on ENCS/ISHL or exempted from inventory listing.

PICCS: All ingredients listed or exempt.

DSL: All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

NZIoC: All ingredients listed or exempt.

SECTION 16. OTHER INFORMATION

Further information

NFPA:

HMIS® IV:

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH: USA. ACGIH Threshold Limit Values (TLV)

ACGIH BEI: ACGIH - Biological Exposure Indices (BEI)

NIOSH REL: USA. NIOSH Recommended Exposure Limits

OSHA Z-1: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

OSHA Z-3: USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts

ACGIH / TWA: 8-hour, time-weighted average

NIOSH REL / TWA: Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek

NIOSH REL / ST: STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday

OSHA Z-1 / TWA: 8-hour time weighted average

OSHA Z-3 / TWA: 8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the
Sources of key data used to compile the Material Safety Data Sheet:

Revision Date: 03/14/2017

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user’s end product, if applicable.