SAFETY DATA SHEET

1. Identification

Product identifier Grease Relief Formula

Other means of identification

Product Code 5249

Recommended use Cleaning

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Malco Products, Inc.

Address 361 Fairview Ave
Barberton, OH 44203
United States

Telephone Phone 800-253-2526
Fax 330-777-8317

Website www.malcopro.com

E-mail msdsinfo@malcopro.com

Contact person Technical Department

Emergency phone number Phone 1-800-424-9300

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Alpha-sulfo-omega-(dodecyloxy) poly(oxy-1,2-ethanediyl) Sodium Salt; Sodium Lauryl Ether Sulfate&quot;</td>
<td>9004-82-4</td>
<td>1 - &lt; 3</td>
<td></td>
</tr>
<tr>
<td>Sodium Dodecyl Sulphate</td>
<td>151-21-3</td>
<td>1 - &lt; 3</td>
<td></td>
</tr>
<tr>
<td>Ethanol 190 Proof/sda40-2</td>
<td>64-17-5</td>
<td>&lt; 1</td>
<td></td>
</tr>
<tr>
<td>&quot;Alcohols, C12-15, Ethoxylated (&gt;1 &lt;2.5 Mol Eo)&quot;</td>
<td>68131-39-5</td>
<td>&lt; 0.2</td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>56-81-5</td>
<td>&lt; 0.2</td>
<td></td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td></td>
<td>90 - 100</td>
<td></td>
</tr>
</tbody>
</table>

Material name: Grease Relief Formula

5249 Version #: 05 Revision date: 03-30-2020 Issue date: 03-16-2016
4. First-aid measures

**Inhalation**
Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact**
Wash off with soap and water. Get medical attention if irritation develops and persists.

**Eye contact**
Rinse with water. Get medical attention if irritation develops and persists.

**Ingestion**
Rinse mouth. Get medical attention if symptoms occur.

**Most important symptoms/effects, acute and delayed**
Direct contact with eyes may cause temporary irritation.

**Indication of immediate medical attention and special treatment needed**
Treat symptomatically.

**General information**
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

**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.

**Specific hazards arising from the chemical**
During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions**
Move containers from fire area if you can do so without risk.

**Specific methods**
Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards**
No unusual fire or explosion hazards noted.

6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Keep unnecessary personnel away.

**Methods and materials for containment and cleaning up**
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.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions
Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

**Precautions for safe handling**
Avoid prolonged exposure. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**
Store in original tightly closed container.

8. Exposure controls/personal protection

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol 190 Proof/sda40-2 (CAS 64-17-5)</td>
<td>PEL</td>
<td>1900 mg/m3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 ppm</td>
<td></td>
</tr>
<tr>
<td>Glycerol (CAS 56-81-5)</td>
<td>PEL</td>
<td>5 mg/m3</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mg/m3</td>
<td>Total dust.</td>
</tr>
</tbody>
</table>
US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol 190 Proof/sda40-2</td>
<td>STEL</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>(CAS 64-17-5)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol 190 Proof/sda40-2</td>
<td>TWA</td>
<td>1900 mg/m³</td>
</tr>
<tr>
<td>(CAS 64-17-5)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Biological limit values

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

Appropriate 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.

Individual protection measures, such as personal protective equipment

- **Eye/face protection**: Wear safety glasses with side shields (or goggles).
- **Skin protection**: Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
- **Respiratory protection**: In case of insufficient ventilation, wear suitable respiratory equipment.
- **General hygiene considerations**: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

- **Appearance**: Viscous.
- **Physical state**: Liquid.
- **Form**: Liquid.
- **Color**: Clear colorless or nearly colorless
- **Odor**: Lemon
- **pH**: 7.5
- **Melting point/freezing point**: 299.35 °F (148.53 °C) estimated
- **Initial boiling point and boiling range**: 671.75 °F (355.41 °C) estimated
- **Flash point**: > 220.0 °F (> 104.4 °C)
- **Evaporation rate**: Not available.
- **Flammability (solid, gas)**: Not applicable.

Upper/lower flammability or explosive limits

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability limit - upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - upper (%)</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

- **Vapor pressure**: 0.00001 hPa estimated
- **Vapor density**: Not available.
- **Relative density**: Not available.
- **Solubility(ies)**: Not available.
- **Partition coefficient (n-octanol/water)**: Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: 1200 cP
Viscosity temperature: 68 °F (20 °C)
Other information:
- Density: 8.61 lbs/gal
- Explosive properties: Not explosive.
- Flammability class: Combustible IIIB estimated
- Kinematic viscosity: 1161.89 cSt
- Kinematic viscosity temperature: 68 °F (20 °C)
- Oxidizing properties: Not oxidizing.
- VOC: 0.47 % w/w By Weight

10. Stability and reactivity
Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability: Material is stable under normal conditions.
Possibility of hazardous reactions: Hazardous polymerization does not occur.
Conditions to avoid: Contact with incompatible materials.
Incompatible materials: Strong oxidizing agents.
Hazardous decomposition products: No hazardous decomposition products are known.

11. Toxicological information
Information on likely routes of exposure
- Inhalation: Prolonged inhalation may be harmful.
- Skin contact: No adverse effects due to skin contact are expected.
- Eye contact: Direct contact with eyes may cause temporary irritation.
- Ingestion: Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics: Direct contact with eyes may cause temporary irritation.

Information on toxicological effects
Acute toxicity

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Dodecyl Sulphate (CAS 151-21-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>1288 mg/kg</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation: Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation: Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization
- Respiratory sensitization: Not a respiratory sensitizer.
- Skin sensitization: This product is not expected to cause skin sensitization.

Germ cell mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity: Not listed.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)  
Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens  
Not listed.

**Reproductive toxicity**  
This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure**  
Not classified.

**Specific target organ toxicity - repeated exposure**  
Not classified.

**Aspiration hazard**  
Not an aspiration hazard.

**Chronic effects**  
Prolonged inhalation may be harmful.

### 12. Ecological information

**Ecotoxicity**  
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Alpha.-sulfo.-omega.-{(dodecyl)oxy/poly(oxy-1,2-ethanediyl) Sodium Salt; Sodium Lauryl Ether Sulfate&quot; (CAS 9004-82-4)</td>
<td>Aquatic</td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Ceriodaphnia dubia)</td>
</tr>
<tr>
<td>&quot;Alcohols, C12-15, Ethoxylated (&gt;1 &lt;2.5 Mol Eo)&quot; (CAS 68131-39-5)</td>
<td>Aquatic</td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Ceriodaphnia dubia)</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Channel catfish (Ictalurus punctatus)</td>
</tr>
<tr>
<td>Ethanol 190 Proof/sda40-2 (CAS 64-17-5)</td>
<td>Aquatic</td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia magna)</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fathead minnow (Pimephales promelas)</td>
</tr>
<tr>
<td>Glycerol (CAS 56-81-5)</td>
<td>Aquatic</td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Rainbow trout,donaldson trout</td>
</tr>
<tr>
<td>(Oncorhynchus mykiss)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium Dodecyl Sulphate (CAS 151-21-3)</td>
<td>Aquatic</td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia obtusa)</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Carp, hawk fish (Cirrhinus mirigala)</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

**Persistence and degradability**  
No data is available on the degradability of this product.

**Bioaccumulative potential**

<table>
<thead>
<tr>
<th>Partition coefficient n-octanol / water (log Kow)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol 190 Proof/sda40-2</td>
<td>-0.31</td>
</tr>
<tr>
<td>Glycerol</td>
<td>-1.76</td>
</tr>
<tr>
<td>Sodium Dodecyl Sulphate</td>
<td>1.6</td>
</tr>
</tbody>
</table>

**Mobility in soil**  
No data available.

**Other adverse effects**  
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

**Disposal instructions**  
Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

**Local disposal regulations**  
Dispose in accordance with all applicable regulations.

**Hazardous waste code**  
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**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).
Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

**DOT**
Not regulated as dangerous goods.

**IATA**
Not regulated as dangerous goods.

**IMDG**
Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

**US federal regulations**
This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**
Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**
Not listed.

**SARA 304 Emergency release notification**
Not regulated.

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**
Not listed.

**SARA 311/312 Hazardous chemical**
Yes

Classified hazard categories
- Acute toxicity (any route of exposure)
- Skin corrosion or irritation
- Serious eye damage or eye irritation

**SARA 313 (TRI reporting)**
Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**
Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**
Not regulated.

**Safe Drinking Water Act (SDWA)**
Not regulated.

**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**
- Ethanol 190 Proof/sda40-2 (CAS 64-17-5) Low priority
- Glycerol (CAS 56-81-5) Other Flavoring Substances with OSHA PEL's

**US state regulations**

**California Proposition 65**
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**International Inventories**

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDLS)</td>
<td>No</td>
</tr>
<tr>
<td>Country(s) or region</td>
<td>Inventory name</td>
<td>On inventory (yes/no)*</td>
</tr>
<tr>
<td>------------------------------</td>
<td>----------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*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, including date of preparation or last revision

<table>
<thead>
<tr>
<th>Issue date</th>
<th>03-16-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision date</td>
<td>03-30-2020</td>
</tr>
<tr>
<td>Version #</td>
<td>05</td>
</tr>
</tbody>
</table>

Disclaimer

Malco Products, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. 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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information in the sheet was written based on the best knowledge and experience currently available.

Revision information

- Physical & Chemical Properties: Multiple Properties
- Physical and chemical properties: Color
- GHS: Classification