1. Identification

Product identifier: Twinkle Countertop Cleaner

Other means of identification

- Product Code: 525419
- Recommended use: Cleaner
- Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

- Manufacturer: 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: Flammable aerosols (Category 1)
- Health hazards: Not classified.
- Environmental hazards: Not classified.
- OSHA defined hazards: Not classified.

Label elements

- Signal word: Danger
- Hazard statement: Extremely flammable aerosol.
- Precautionary statement:
  - Prevention: Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.
  - Response: Wash hands after handling.
  - Storage: Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
  - 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>2-(2-Butoxyethoxy)ethanol</td>
<td></td>
<td>112-34-5</td>
<td>5 - &lt; 10</td>
</tr>
<tr>
<td>Ethanol 190 Proof/sda40-2</td>
<td></td>
<td>64-17-5</td>
<td>5 - &lt; 10</td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td></td>
<td></td>
<td>80 - &lt; 90</td>
</tr>
</tbody>
</table>

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.
4. First-aid measures

Inhalation
If symptoms develop move victim to fresh air. Get medical attention if symptoms 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
Not available.

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical
Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Fire fighting equipment/instructions
Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.

General fire hazards
Extremely flammable aerosol.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up
Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flames, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. For waste disposal, see section 13 of the SDS.

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

7. Handling and storage

Precautions for safe handling
Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities
Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store away from incompatible materials (see Section 10 of the SDS).
8. Exposure controls/personal protection

Occupational exposure limits

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol 190 Proof/sda40-2 (CAS 64-17-5)</td>
<td>PEL</td>
<td>1900 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 ppm</td>
</tr>
</tbody>
</table>

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)</td>
<td>TWA</td>
<td>10 ppm</td>
<td>Inhalable fraction and vapor.</td>
</tr>
<tr>
<td>Ethanol 190 Proof/sda40-2 (CAS 64-17-5)</td>
<td>STEL</td>
<td>1000 ppm</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 (CAS 64-17-5)</td>
<td>TWA</td>
<td>1900 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 ppm</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
Hand protection
Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other
Wear suitable protective clothing.

Respiratory protection
If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
When using do not smoke. 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
Aerosol.

Physical state
Gas Aerosol.

Form
Aerosol.

Color
Not available.

Odor
Not available.

Odor threshold
Not available.

pH
Not available.

Melting point/freezing point
Not available.

Initial boiling point and boiling range
212 °F (100 °C) estimated

Flash point
-156.0 °F (-104.4 °C) estimated

Evaporation rate
Not available.

Flammability (solid, gas)
Not available.

Upper/lower flammability or explosive limits

<table>
<thead>
<tr>
<th>Flammability limit - lower (%)</th>
<th>4.3 estimated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explosive limit - lower (%)</td>
<td>Not available</td>
</tr>
</tbody>
</table>
Explosive limit - upper (%)   Not available.
Vapor pressure 60 psig @70F estimated
Vapor density Not available.
Relative density Not available.
Solubility(ies) Solubility (water) Not available.
Auto-ignition temperature Not available.
Decomposition temperature Not available.
Viscosity Not available.

Other information
Explosive properties Not explosive.
Oxidizing properties Not oxidizing.
Specific gravity 0.97 estimated

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 Avoid temperatures exceeding the flash point. 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>2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>2700 mg/kg</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Guinea pig</td>
<td>2000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Mouse</td>
<td>2400 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Rabbit</td>
<td>2200 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>4500 mg/kg</td>
</tr>
<tr>
<td>Ethanol 190 Proof/sda40-2 (CAS 64-17-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Mouse</td>
<td>39 mg/l, 4 Hours</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>20000 ppm, 10 Hours</td>
</tr>
</tbody>
</table>
### Components

<table>
<thead>
<tr>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td></td>
</tr>
<tr>
<td>Guinea pig</td>
<td>5.6 g/kg</td>
</tr>
<tr>
<td>Mouse</td>
<td>3450 mg/kg</td>
</tr>
<tr>
<td>Rat</td>
<td>6.2 g/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 available.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

#### US. National Toxicology Program (NTP) Report on Carcinogens

Not available.

### 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 likely, due to the form of the product.

### 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>2-(2-Butoxyethoxy)ethanol (CAS 112-34-5)</td>
<td>Aquatic</td>
<td>LC50</td>
</tr>
<tr>
<td>Ethanol 190 Proof/sda40-2 (CAS 64-17-5)</td>
<td>Aquatic</td>
<td>EC50</td>
</tr>
<tr>
<td></td>
<td>Fish</td>
<td>LC50</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

#### Partition coefficient n-octanol / water (log Kow)

<table>
<thead>
<tr>
<th>Component</th>
<th>Log Kow</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-Butoxyethoxy)ethanol</td>
<td>0.56</td>
</tr>
<tr>
<td>Ethanol 190 Proof/sda40-2</td>
<td>-0.31</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. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations.

**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).

**Contaminated packaging**
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. Do not re-use empty containers.

14. Transport information

**DOT**

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1950</th>
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</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>AEROSOLS, FLAMMABLE</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>2.1</td>
</tr>
<tr>
<td>Class</td>
<td>2.1</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Label(s)</td>
<td>2.1</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Read safety instructions, SDS and emergency procedures before handling.</td>
</tr>
<tr>
<td>Packaging non bulk</td>
<td>None</td>
</tr>
<tr>
<td>Packaging bulk</td>
<td>None</td>
</tr>
</tbody>
</table>

**IATA**

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1950</th>
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<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Aerosols, flammable</td>
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<tr>
<td>Transport hazard class(es)</td>
<td>2.1</td>
</tr>
<tr>
<td>Class</td>
<td>2.1</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No.</td>
</tr>
<tr>
<td>ERG Code</td>
<td>10L</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Read safety instructions, SDS and emergency procedures before handling.</td>
</tr>
<tr>
<td>Other information</td>
<td>Passenger and cargo aircraft Allowed.</td>
</tr>
<tr>
<td></td>
<td>Cargo aircraft only Allowed.</td>
</tr>
</tbody>
</table>

**IMDG**

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1950</th>
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<tbody>
<tr>
<td>UN proper shipping name</td>
<td>AEROSOLS, FLAMMABLE</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>2.1</td>
</tr>
<tr>
<td>Class</td>
<td>2.1</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>Marine pollutant No.</td>
</tr>
<tr>
<td>EmS</td>
<td>Not available.</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Read safety instructions, SDS and emergency procedures before handling.</td>
</tr>
<tr>
<td>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</td>
<td>Not established.</td>
</tr>
</tbody>
</table>
15. Regulatory information

**US federal regulations**

This product is 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.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

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

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

No

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.

**US state regulations**

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Ethanol 190 Proof/sda40-2 (CAS 64-17-5)
US. New Jersey Worker and Community Right-to-Know Act
Ethanol 190 Proof/sda40-2 (CAS 64-17-5)

US. Pennsylvania Worker and Community Right-to-Know Law
Ethanol 190 Proof/sda40-2 (CAS 64-17-5)

US. Rhode Island RTK
Not regulated.

US. 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>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</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>09-16-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision date</td>
<td>09-16-2016</td>
</tr>
<tr>
<td>Version #</td>
<td>02</td>
</tr>
</tbody>
</table>

Disclaimer
Malco Corporate 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