



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** Twinkle Brass & Copper Cleaner

**Other means of identification**  
**Product Code** 5251

**Recommended use** Metal Polish

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**  
**Manufacturer**

**Company name** Malco Products, Inc.  
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Barberton, OH 44203  
United States

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**Phone** 1-800-424-9300

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards** Serious eye damage/eye irritation Category 2B

**Environmental hazards** Not classified.

**OSHA defined hazards** Not classified.

### Label elements

**Hazard symbol** None.

**Signal word** Warning

**Hazard statement** Causes eye irritation.

**Precautionary statement**

**Prevention** Wash thoroughly after handling.

**Response** If swallowed: Rinse mouth. Do NOT induce vomiting. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**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** 49.92% of the mixture consists of component(s) of unknown acute oral toxicity. 78% of the mixture consists of component(s) of unknown acute dermal toxicity. 78% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 78% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Silicon Dioxide		14808-60-7	30 - < 40
Citric Acid Anhydrous		77-92-9	5 - < 10
"Poly(oxy-1,2-ethanediyl),?-hydro-?-hydroxy; Ethane-1,2-diol, Ethoxylated (>1 <4.5 Mol Eo)"		25322-68-3	3 - < 5

Chemical name	Common name and synonyms	CAS number	%
Glycerol		56-81-5	1 - < 3
Aluminium Oxide; Alumina		1344-28-1	< 1
Ferric Oxide		1309-37-1	< 0.1
Sodium Hydroxide		1310-73-2	< 0.1
Other components below reportable levels			50 - < 60

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

#### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	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. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Should not be released into the environment.  Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. 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.
<b>Environmental precautions</b>	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

#### 7. Handling and storage

<b>Precautions for safe handling</b>	Avoid contact with eyes. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

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

Components	Type	Value	Form
Aluminium Oxide; Alumina (CAS 1344-28-1)	PEL	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.
Ferric Oxide (CAS 1309-37-1)	PEL	10 mg/m <sup>3</sup>	Fume.
		5 mg/m <sup>3</sup>	Respirable fraction.
Glycerol (CAS 56-81-5)	PEL	15 mg/m <sup>3</sup>	Total dust.
		0.05 mg/m <sup>3</sup>	
Silicon Dioxide (CAS 14808-60-7)	PEL	0.05 mg/m <sup>3</sup>	
Sodium Hydroxide (CAS 1310-73-2)	PEL	2 mg/m <sup>3</sup>	

#### US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Silicon Dioxide (CAS 14808-60-7)	TWA	0.1 mg/m <sup>3</sup>	Respirable.
		2.4 mppcf	Respirable.

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Ferric Oxide (CAS 1309-37-1)	TWA	5 mg/m <sup>3</sup>	Respirable fraction.
Silicon Dioxide (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m <sup>3</sup>	

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Ferric Oxide (CAS 1309-37-1)	TWA	5 mg/m <sup>3</sup>	Dust and fume.
Silicon Dioxide (CAS 14808-60-7)	TWA	0.05 mg/m <sup>3</sup>	Respirable dust.
Sodium Hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m <sup>3</sup>	

#### US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value	Form
"Poly(oxy-1,2-ethanediyl),?-hydro-?-hydroxy; Ethane-1,2-diol, Ethoxylated (>1 <4.5 Mol Eo)" (CAS 25322-68-3)	TWA	10 mg/m <sup>3</sup>	Particulate.

#### 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. Provide eyewash station.

#### 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.

###### Other

Wear suitable protective clothing.

##### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

##### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

**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**

<b>Appearance</b>	Paste.
<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Color</b>	Greenish-Yellow
<b>Odor</b>	Lemon
<b>Odor threshold</b>	Not available.
<b>pH</b>	1 - 2.5
<b>Melting point/freezing point</b>	1092.05 °F (588.92 °C) estimated
<b>Initial boiling point and boiling range</b>	212 °F (100 °C)
<b>Flash point</b>	392.5 °F (200.3 °C) estimated
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	0.00003 hPa estimated
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	13.62 lb/gal
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.
<b>Percent volatile</b>	10.24 % estimated

**10. Stability and reactivity**

<b>Reactivity</b>	Reacts violently with strong alkaline substances. This product may react with reducing agents.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials. Do not mix with other chemicals.
<b>Incompatible materials</b>	Bases. Reducing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

**11. Toxicological information****Information on likely routes of exposure**

<b>Inhalation</b>	Prolonged inhalation may be harmful.
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**Skin contact** No adverse effects due to skin contact are expected.  
**Eye contact** Causes eye irritation.  
**Ingestion** Expected to be a low ingestion hazard.  
**Symptoms related to the physical, chemical and toxicological characteristics** Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort.

**Information on toxicological effects**

**Acute toxicity** Not known.  
**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.  
**Serious eye damage/eye irritation** Causes eye 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** Not classifiable as to carcinogenicity to humans.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Ferric Oxide (CAS 1309-37-1) 3 Not classifiable as to carcinogenicity to humans.  
 Silicon Dioxide (CAS 14808-60-7) 1 Carcinogenic to humans.

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

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** Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

Components	Species	Test Results
<b>"Poly(oxy-1,2-ethanediyl),?-hydro-?-hydroxy; Ethane-1,2-diol, Ethoxylated (&gt;1 &lt;4.5 Mol Eo)" (CAS 25322-68-3)</b>		
<b>Aquatic</b>		
Fish	LC50 Atlantic salmon ( <i>Salmo salar</i> )	> 1000 mg/l, 96 hours
Glycerol (CAS 56-81-5)		
<b>Aquatic</b>		
Fish	LC50 Rainbow trout, donaldson trout ( <i>Oncorhynchus mykiss</i> )	51000 - 57000 mg/l, 96 hours
Sodium Hydroxide (CAS 1310-73-2)		
<b>Aquatic</b>		
Fish	LC50 Western mosquitofish ( <i>Gambusia affinis</i> )	125 mg/l, 96 hours

\* 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)**  
 Glycerol -1.76

**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. Do not allow this material to drain into sewers/water supplies. 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.

### 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 applicable.

### 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)**

Sodium Hydroxide (CAS 1310-73-2) Listed.

#### **SARA 304 Emergency release notification**

Not regulated.

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

Not regulated.

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

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

#### **SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No

#### **SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Aluminium Oxide; Alumina	1344-28-1	< 1

#### **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**

Glycerol (CAS 56-81-5)

Other Flavoring Substances with OSHA PEL's

**US state regulations**

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.

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Silicon Dioxide (CAS 14808-60-7)

Sodium Hydroxide (CAS 1310-73-2)

**International Inventories**

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

\*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****Issue date** 08-18-2015**Revision date** 08-07-2017**Version #** 06

**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.

**Revision information** Hazard(s) identification: Response  
Composition / Information on Ingredients: Component Summary  
First-aid measures: Most important symptoms/effects, acute and delayed  
Handling and storage: Precautions for safe handling  
Exposure controls/personal protection: Exposure guidelines  
Exposure controls/personal protection: General hygiene considerations  
Exposure controls/personal protection: Respiratory protection  
Exposure controls/personal protection: PPE Symbols  
Physical & Chemical Properties: Multiple Properties  
Stability and reactivity: Incompatible materials  
Toxicological information: Carcinogenicity  
Toxicological information: Symptoms related to the physical, chemical and toxicological characteristics  
Regulatory information: US state regulations  
GHS: Classification