Safety Data Sheet
Copper & Brass Polish

Reference Number: HOW-116_Copper & Brass Polish
SDS Revision Date: 08/12/2015

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product Identity  Copper & Brass Polish
Alternate Names  Copper & Brass Polish

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use  For polishing copper, brass, bronze or stainless steel.
Application Method  See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet
Company Name  Howard Products, Inc.
560 Linne Road
Paso Robles, CA 93446

Emergency
CHEMTREC (USA)  (800) 424-9300
Customer Service: Howard Products, Inc.  EMERGENCY PHONE:1-805-227-1000
FAX PHONE: 1-805-227-1007

2. Hazard identification of the product

2.1. Classification of the substance or mixture
Skin Irrit. 3;H316  Causes mild skin irritation. (Not adopted by US OSHA)
Eye Dam. 1;H318  Causes serious eye damage.
STOT RE 2;H373  May cause damage to organs through prolonged or repeated exposure. Specific Target Organs: (Not Available)

2.2. Label elements
Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.

Danger

H316 Causes mild skin irritation.
H318 Causes serious eye damage.
H373 May cause damage to organs through prolonged or repeated exposure.

[Prevention]:
P260 Do not breathe mist / vapors / spray.
P280 Wear protective gloves / eye protection / face protection.

[Response]:
P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P310 Immediately call a POISON CENTER or doctor / physician.
P314 Get Medical advice / attention if you feel unwell.
P332+313 If skin irritation occurs: Get medical advice / attention.

[Storage]:
No GHS storage statements

[Disposal]:
No GHS disposal statements

### 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

<table>
<thead>
<tr>
<th>Ingredient/Chemical Designations</th>
<th>Weight %</th>
<th>GHS Classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bentonite</td>
<td>10 - 25</td>
<td></td>
<td>[1]</td>
</tr>
<tr>
<td>Crystalline Silica - Quartz (Liquified)</td>
<td>10 - 25</td>
<td>Acute Tox. 4; STOT RE 2;H373</td>
<td>[1][2]</td>
</tr>
<tr>
<td>Butanediolic acid, 2,3-dihydroxy- [R-(R*,R*)]-</td>
<td>1.0 - 10</td>
<td></td>
<td>[1]</td>
</tr>
<tr>
<td>Oleic acid</td>
<td>1.0 - 10</td>
<td>Skin Irrit. 2;H315 Eye Irrit. 2;H319</td>
<td>[1]</td>
</tr>
<tr>
<td>Pine oil</td>
<td>1.0 - 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Igepal CA630</td>
<td>1.0 - 10</td>
<td>Skin Irrit. 2;H315 Eye Irrit. 2;H319 STOT SE 3;H335 Acute Tox. 4;H302 Eye Dam. 1;H318 Aquatic Chronic 2;H411</td>
<td>[1]</td>
</tr>
</tbody>
</table>

[1] Substance classified with a health or environmental hazard.
*The full texts of the phrases are shown in Section 16.
4. First aid measures

4.1. Description of first aid measures

General
In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation
Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give
artificial respiration. If unconscious place in the recovery position and obtain immediate
medical attention. Give nothing by mouth.

Eyes
Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes
with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get
medical attention if any discomfort continues.

Skin
Remove contaminated clothing. Wash skin thoroughly with soap and water or use a
recognized skin cleanser.

Ingestion
If victim is conscious and alert, give 2-4 cupfuls of milk or water. DO NOT INDUCE
VOMITING.

4.2. Most important symptoms and effects, both acute and delayed

Overview
Physician: Danger of aspiration must be weighed against toxicity.
Inhalation hazard, only if dust if created.
See section 2 for further details.

Eyes
Causes serious eye damage.

Skin
Causes mild skin irritation. (Not adopted by US OSHA)

5. Fire-fighting measures

5.1. Extinguishing media
Use media appropriate for surrounding area.

5.2. Special hazards arising from the substance or mixture
Hazardous decomposition: No hazardous decomposition data available.
Do not breathe mist / vapors / spray.

5.3. Advice for fire-fighters
Not applicable
ERG Guide No. ----
6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions
Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up
Wipe up with cloth or sponge.

7. Handling and storage

7.1. Precautions for safe handling
See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities
Store in a cool, dry place.
Avoid generating dust. DO NOT LET DRY TO A POWDER.
Incompatible materials: No data available.
See section 2 for further details. - [Storage]:

7.3. Specific end use(s)
No data available.

8. Exposure controls and personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Ingredient</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000087-69-4</td>
<td>Butanedioic acid, 2,3-dihydroxy- [R-(R',R')]-</td>
<td>OSHA</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier</td>
<td>No Established Limit</td>
</tr>
<tr>
<td>0000112-80-1</td>
<td>Oleic acid</td>
<td>OSHA</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier</td>
<td>No Established Limit</td>
</tr>
<tr>
<td>0001302-78-9</td>
<td>Bentonite</td>
<td>OSHA</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>No Established Limit</td>
</tr>
</tbody>
</table>
8.2. Exposure controls

Respiratory

Dust mask, if dust is generated.

Eyes

Safety glasses with side shields

Skin

Not Applicable

Engineering Controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to
maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Grey Creamy Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild Pine Odor</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not Measured</td>
</tr>
<tr>
<td>pH</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>&gt;200 F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Evaporation rate (Ether = 1)</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Lower Explosive Limit: N/A</td>
</tr>
<tr>
<td></td>
<td>Upper Explosive Limit: N/A</td>
</tr>
<tr>
<td>Vapor pressure (Pa)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>&lt; 1 (Air=1)</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Partial</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Kow)</td>
<td>Not Measured</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>N/A</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity (cSt)</td>
<td>Not available</td>
</tr>
</tbody>
</table>

9.2. Other information
No other relevant information.

10. Stability and reactivity

10.1. Reactivity
Hazardous Polymerization will not occur.

10.2. Chemical stability
Stable under normal circumstances.

10.3. Possibility of hazardous reactions
No data available.

10.4. Conditions to avoid
Safety Data Sheet
Copper & Brass Polish

Avoid high temperatures. Do not mix with other chemicals.

10.5. Incompatible materials
No data available.

10.6. Hazardous decomposition products
No hazardous decomposition data available.

11. Toxicological information

Acute toxicity

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Oral LD50, mg/kg</th>
<th>Skin LD50, mg/kg</th>
<th>Inhalation Vapor LD50, mg/L/4hr</th>
<th>Inhalation Dust/Mist LD50, mg/L/4hr</th>
<th>Inhalation Gas LD50, ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bentonite - (1302-78-9)</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Crystalline Silica - Quartz - (14808-60-7) (Liquified)</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Butanedioic acid, 2,3-dihydroxy- [R-(R*,R*)]- (87-69-4)</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Oleic acid - (112-80-1)</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Pine oil - (8002-09-3)</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Igepal CA630 - (68987-90-6)</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
<th>Hazard Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>3</td>
<td>Causes mild skin irritation. (Not adopted by US OSHA)</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>1</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>Respiratory sensitzation</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Skin sensitzation</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
12. Ecological information

12.1. Toxicity
No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>96 hr LC50 fish, mg/l</th>
<th>48 hr EC50 crustacea, mg/l</th>
<th>ErC50 algae, mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bentonite - (1302-78-9)</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Crystalline Silica - Quartz - (14808-60-7) (Liquified)</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Butanediol acid, 2,3-dihydroxy- [R-(R*,R*)]- - (87-69-4)</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Oleic acid - (112-80-1)</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Pine oil - (8002-09-3)</td>
<td>18.35, Oncorhynchus mykiss</td>
<td>24.50, Daphnia magna</td>
<td>Not Available</td>
</tr>
<tr>
<td>Igepal CA630 - (68987-90-6)</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
There is no data available on the preparation itself.

12.3. Bioaccumulative potential
Not Measured

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects
Ecotoxicity:
The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.

13. Disposal considerations

13.1. Waste treatment methods
Do not allow into drains or water courses. Wastes and emptied containers should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act.

Using information provided in this data sheet advice should be obtained from the Waste Regulation Authority, whether the special waste regulations apply.
Wash rags that are used with plenty of soap.
14. Transport information

<table>
<thead>
<tr>
<th>DOT (Domestic Surface Transportation)</th>
<th>IMO / IMDG (Ocean Transportation)</th>
<th>ICAO/IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number</td>
<td>Not Applicable</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
<td>Not Regulated</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>DOT Hazard Class: Not Applicable</td>
<td>IMDG: Not Applicable Air Class: Not Applicable</td>
</tr>
<tr>
<td></td>
<td>DOT Label: ---</td>
<td>Sub Class: Not Applicable</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>IMDG Marine Pollutant: No</td>
<td></td>
</tr>
</tbody>
</table>

14.6. Special precautions for user
No further information

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not Applicable

15. Regulatory information

Regulatory Overview
The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA)
All components of this material are either listed or exempt from listing on the TSCA Inventory.

WHMIS Classification
D2B E

US EPA Tier II Hazards

Fire: No
Sudden Release of Pressure: No
Reactive: No
Immediate (Acute): Yes
Delayed (Chronic): Yes

EPCRA 311/312 Chemicals and RQs:
(No Product Ingredients Listed)

EPCRA 302 Extremely Hazardous:
(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals:
(No Product Ingredients Listed)

Proposition 65 - Carcinogens (>0.0%):
(No Product Ingredients Listed)

Proposition 65 - Developmental Toxins (>0.0%):
(No Product Ingredients Listed)

**Proposition 65 - Female Repro Toxins (>0.0%):**
(No Product Ingredients Listed)

**Proposition 65 - Male Repro Toxins (>0.0%):**
(No Product Ingredients Listed)

**N.J. RTK Substances (>1%):**
- Pine oil

**Penn RTK Substances (>1%):**
- Oleic acid

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**16. Other information**

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:
- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H411 Toxic to aquatic life with long lasting effects.

**This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.**

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

End of Document