SAFETY DATA SHEET

1. Identification

Product identifier: Starbrite Rust Stain Remover

Other means of identification

<table>
<thead>
<tr>
<th>Product code</th>
<th>892XX</th>
</tr>
</thead>
</table>

Recommended use: Cleaner

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Company name: Star brite Inc.
Address: 4041 SW 47th Avenue
Fort Lauderdale, FL 33314 US

Telephone: General Information: (954) 587-6280
E-mail: Not available.
Contact person: Vincent Waclawek
Emergency phone number: 24-Hour Emergency: CHEMTREC: (703) 527-3887 or (800) 424-9300

2. Hazard(s) identification

Physical hazards: Flammable liquids Category 4
Health hazards: Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2A

OSHA defined hazards: Not classified.

Label elements

Signal word: Warning
Hazard statement: Combustible liquid. Causes skin irritation. Causes serious eye irritation.

Precautionary statement

Prevention: Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing mist or vapor. Wash thoroughly after handling. Avoid release to the environment.
Response: If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Take off contaminated clothing and wash before reuse.
Storage: Keep locked-up.
Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

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

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxalic acid</td>
<td>144-62-7</td>
<td>8</td>
</tr>
<tr>
<td>Ethylene glycol n-butyl ether</td>
<td>111-76-2</td>
<td>4.5</td>
</tr>
</tbody>
</table>
4. First-aid measures

**Inhalation**
If symptomatic, move to fresh air. Get medical attention if symptoms persist.

**Skin contact**
Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse.

**Eye contact**
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.

**Ingestion**
Seek medical advice.

**Most important symptoms/effects, acute and delayed**
Causes skin and eye irritation. May cause respiratory tract irritation.

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

5. Fire-fighting measures

**Suitable extinguishing media**

**Unsuitable extinguishing media**
None known.

**Specific hazards arising from the chemical**
Combustible liquid and vapor.

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

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

**Specific methods**
Use water spray to cool unopened containers.

6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Wear protective clothing as described in Section 8 of this safety data sheet. Ensure adequate ventilation. Ventilate closed spaces before entering them. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**Methods and materials for containment and cleaning up**
Stop the flow of material, if this is without risk. Prevent entry into waterways, sewers, basements or confined areas. Dike the spilled material, where this is possible. Collect spillage. Do not allow material to contaminate ground water system.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece).

Large Spills: Dike far ahead of spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Never return spills to original containers for re-use. Following product recovery, flush area with water. This material and its container must be disposed of as hazardous waste. Clean up in accordance with all applicable regulations.

**Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not contaminate water.

7. Handling and storage

**Precautions for safe handling**
Keep away from heat, spark, open flames and other sources of ignition. Avoid contact with eyes, skin, and clothing. Avoid breathing mist or vapor. Wear personal protective equipment. Use only with adequate ventilation. Wash thoroughly after handling.

**Conditions for safe storage, including any incompatibilities**
Keep locked-up. Keep container tightly closed and in a well-ventilated place. Do not handle or store near an open flame, heat or other sources of ignition. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

8. Exposure controls/personal protection

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol n-butyl ether (CAS 111-76-2)</td>
<td>PEL</td>
<td>240 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 ppm</td>
</tr>
</tbody>
</table>

Starbrite Rust Stain Remover

SDS US

919311-CC  Version #: 01  Revision date: -  Issue date: 15-May-2014
### 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>Oxalic acid (CAS 144-62-7)</td>
<td>PEL</td>
<td>1 mg/m³</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>Ethylene glycol n-butyl ether (CAS 111-76-2)</td>
<td>TWA</td>
<td>20 ppm</td>
</tr>
<tr>
<td>Oxalic acid (CAS 144-62-7)</td>
<td>STEL</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>Oxalic acid (CAS 144-62-7)</td>
<td>TWA</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Ethylene glycol n-butyl ether (CAS 111-76-2)</td>
<td>TWA</td>
<td>24 mg/m³</td>
</tr>
<tr>
<td>Oxalic acid (CAS 144-62-7)</td>
<td>STEL</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>Oxalic acid (CAS 144-62-7)</td>
<td>TWA</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

### Biological limit values

#### ACGIH Biological Exposure Indices

<table>
<thead>
<tr>
<th>Components</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol n-butyl ether (CAS 111-76-2)</td>
<td>200 mg/g</td>
<td>Butyrylpyruvic acid (BAA), with hydrolysis</td>
<td>Creatinine in urine</td>
<td>*</td>
</tr>
</tbody>
</table>

* - For sampling details, please see the source document.

### Exposure guidelines

**No exposure standards allocated.**

#### US - California OELs: Skin designation

Ethylene glycol n-butyl ether (CAS 111-76-2) Can be absorbed through the skin.

#### US - Minnesota Haz Subs: Skin designation applies

Ethylene glycol n-butyl ether (CAS 111-76-2) Skin designation applies.

#### US - Tennessee OELs: Skin designation

Ethylene glycol n-butyl ether (CAS 111-76-2) Can be absorbed through the skin.

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

Ethylene glycol n-butyl ether (CAS 111-76-2) Can be absorbed through the skin.

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

Ethylene glycol n-butyl ether (CAS 111-76-2) Can be absorbed through the skin.

### Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Provide adequate ventilation. General ventilation normally adequate. 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 protective gloves. Suitable gloves can be recommended by the glove supplier.

##### Other

Wear suitable protective clothing. Anti-static and flame-retardant protective clothing is recommended. Wear chemical protective equipment that is specifically recommended by the manufacturer.

#### Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

#### Thermal hazards

Not available.
General hygiene considerations
Always observe national occupational health and hygiene requirements including requirements for medical surveillance.

9. Physical and chemical properties

Appearance
Clear liquid.

Physical state
Liquid.

Form
Liquid.

Color
Clear.

Odor
Sweet. Pleasant.

Odor threshold
Not available.

pH
1 Approx.

Melting point/freezing point
Not available.

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

Flash point
153.9 °F (67.7 °C)

Evaporation rate
Similar to water.

Flammability (solid, gas)
Not available.

Upper/lower flammability or explosive limits
- Flammability limit - lower (%)
  Not available.
- Flammability limit - upper (%)
  Not available.
- Explosive limit - lower (%)
  Not available.
- Explosive limit - upper (%)
  Not available.

Vapor pressure
Not available.

Vapor density
Not available.

Relative density
1.01 @ 20 °C

Solubility (ies)
- Solubility (water)
  Completely soluble.

Partition coefficient (n-octanol/water)
Not available.

Auto-ignition temperature
Not available.

Decomposition temperature
Not available.

Viscosity
Not available.

Other information
- Percent volatile
  Not available.

10. Stability and reactivity

Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability
Stable at normal conditions.

Possibility of hazardous reactions
Hazardous polymerization does not occur.

Conditions to avoid
Heat, sparks, flames, elevated temperatures. Contact with incompatible materials.

Incompatible materials
Strong oxidizing agents. Chlorites and hypochlorites.

Hazardous decomposition products
No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure
- Ingestion
  No harmful effects expected in amounts likely to be ingested by accident.
- Inhalation
  May cause respiratory tract irritation.
- Skin contact
  Causes skin irritation.
- Eye contact
  Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics

Information on toxicological effects

Acute toxicity
Not classified.

<table>
<thead>
<tr>
<th>Components</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol n-butyl ether (CAS 111-76-2)</td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Dermal</strong></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Mouse</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Guinea pig</td>
</tr>
<tr>
<td></td>
<td>Mouse</td>
</tr>
<tr>
<td></td>
<td>Rabbit</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Mouse</td>
</tr>
<tr>
<td></td>
<td>Rabbit</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
</tr>
<tr>
<td>Oxalic acid (CAS 144-62-7)</td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/eye irritation
Causes serious eye irritation.

Respiratory or skin sensitization
Respiratory sensitization
Not classified.

Skin sensitization
Not classified.

Germ cell mutagenicity
Not classified.

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

IARC Monographs. Overall Evaluation of Carcinogenicity
Ethylene glycol n-butyl ether (CAS 111-76-2) 3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity
Not classified.

Specific target organ toxicity - single exposure
Not classified.

Specific target organ toxicity - repeated exposure
Not classified.

Aspiration hazard
Not classified.

12. Ecological information

Ecotoxicity
Not expected to be harmful to aquatic organisms.

<table>
<thead>
<tr>
<th>Components</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol n-butyl ether (CAS 111-76-2)</td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
</tr>
</tbody>
</table>
### Components

<table>
<thead>
<tr>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxalic acid (CAS 144-62-7)</td>
<td>125 - 150 mg/l, 48 hours</td>
</tr>
</tbody>
</table>

#### Species Test Results

**Aquatic**

- **Crustacea**
  - EC50: Water flea (Daphnia magna)
  - 125 - 150 mg/l, 48 hours

**Persistence and degradability**

- Not established.

**Bioaccumulative potential**

- Not established.

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

- Ethylene glycol n-butyl ether (CAS 111-76-2): 0.83

**Mobility in soil**

- Not established.

**Other adverse effects**

- Not established.

### 13. Disposal considerations

**Disposal instructions**

- Dispose of contents/container in accordance with local/regional/national/international 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 in accordance with applicable federal, state, and local regulations.

**Contaminated packaging**

- Offer rinsed packaging material to local recycling facilities.

### 14. Transport information

**DOT**

- UN number: NA1993
- UN proper shipping name: Combustible liquids, n.o.s. (Ethylene glycol n-butyl ether)
- Transport hazard class(es):
  - Class: Combustible Liquid
  - Subsidiary risk: -
  - Packing group: III
- Special precautions for user: Not available.
- Special provisions: B1, B52, IB3, T4, TP1, TP29
- Packaging exceptions: 150
- Packaging non bulk: 203
- Packaging bulk: 242

**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 available.

### 15. Regulatory information

**US federal regulations**

- This product is hazardous according to OSHA 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

- Oxalic acid (CAS 144-62-7): 1.0 % One-Time Export Notification only.


- Not listed.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

- Ethylene glycol n-butyl ether (CAS 111-76-2): 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
Yes
SARA 313 (TRI reporting)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>% by wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene glycol n-butyl ether</td>
<td>111-76-2</td>
<td>4.5</td>
</tr>
</tbody>
</table>

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

US. Massachusetts RTK - Substance List
Ethylene glycol n-butyl ether (CAS 111-76-2)
Oxalic acid (CAS 144-62-7)

US. New Jersey Worker and Community Right-to-Know Act
Ethylene glycol n-butyl ether (CAS 111-76-2)
Oxalic acid (CAS 144-62-7)

US. Pennsylvania Worker and Community Right-to-Know Law
Ethylene glycol n-butyl ether (CAS 111-76-2)
Oxalic acid (CAS 144-62-7)

US. Rhode Island RTK
Ethylene glycol n-butyl ether (CAS 111-76-2)

US. California Proposition 65
US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
Not listed.

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>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
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<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*"Yes" indicates this product complies 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 15-May-2014
Revision date -
Version # 01
NFPA Ratings

References
ACGIH
EPA: AQUIRE database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

Disclaimer
The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Star brite assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Star brite assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.