1. Product and Company Identification

Product Name: Dishwasher Magic Dish & Glassware Spot Remover

Synonym(s):
- Glisten Dishwasher Magic Detergent Booster
- Glisten Dishwashing Booster
- Glisten Dishwasher Cleaner & Hard Water Spot Remover
- Freedom Glisten Dishwasher Cleaner & Hard Water Spot Remover

CAS #:
Mixture

Product use:
Hard Water Spot Remover

Manufacturer:
Iron Out dba Summit Brands
7201 Engle Road
Fort Wayne, IN 46804-5875 US
Phone: 260-483-2519
Emergency Phone: 1-800-424-9300 (CHEMTREC)

2. Hazards Identification

Emergency overview
CAUTION
This product is severely irritating and may cause chemical burns with prolonged contact.

Potential short term health effects
Routes of exposure:
- Eye, Skin contact, Inhalation, Ingestion.

Eyes:
May cause severe irritation or chemical burns.

Skin:
May cause severe irritation or chemical burns.

Inhalation:
Dust may cause respiratory tract irritation or chemical burns.

Ingestion:
Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.

Target organs:
Eyes. Skin. Respiratory system.

Chronic effects:
Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.

Signs and symptoms:
The product may cause burns to eyes, skin and mucous membranes.

OSHA Regulatory Status:
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential environmental effects:
This product has not been tested.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid</td>
<td>77-92-9</td>
<td>60 - 100</td>
</tr>
</tbody>
</table>

4. First Aid Measures

First aid procedures

Eye contact:
Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.

Skin contact:
Brush away excess of dry material. Immediately flush with cool water for 15 minutes. Obtain medical attention if irritation persists. Wash contaminated clothing well before reuse or discard.

Inhalation:
If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Ingestion

Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.

General advice

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties

Not flammable by WHMIS/OSHA criteria.

Extinguishing media

Suitable extinguishing media


Unsuitable extinguishing media

Not available

Protection of firefighters

Specific hazards arising from the chemical

Not available

Protective equipment for firefighters

Firefighters should wear full protective clothing including self contained breathing apparatus.

Hazardous combustion products

May include and are not limited to: Oxides of carbon.

Explosion data

Sensitivity to mechanical impact

Not available

Sensitivity to static discharge

Not available

6. Accidental Release Measures

Personal precautions

Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

Environmental precautions

Do not contaminate water.

Methods for containment

Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up

Before attempting clean up, refer to hazard data given above. Use broom or dry vacuum to collect material for proper disposal without raising dust. Rinse area with water. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice.

7. Handling and Storage

Handling

Use good industrial hygiene practices in handling this material. Do not get this material in your eyes, on your skin, or on your clothing. Avoid dust formation. Wash thoroughly after handling.

Storage

Keep out of the reach of children. Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

Exposure limits

Ingredient(s) | Exposure Limits
--- | ---
Citric acid | ACGIH-TLV
| TWA: 10 mg/m3
| OSHA-PEL
| TWA: 10 mg/m3

Engineering controls

Use only under good ventilation conditions or with respiratory protection.

Personal protective equipment

Eye / face protection

Safety glasses or goggles.

Hand protection

Rubber gloves. Confirm with a reputable supplier first.

Skin and body protection

As required by employer code.

Respiratory protection

If ventilation is not adequate use dust mask or gas respirators with dust filters.
9. Physical and Chemical Properties

**Appearance**  
Powder

**Color**  
White.

**Form**  
Powder

**Odor**  
Lemon.

**Odor threshold**  
Not available

**Physical state**  
Solid

**pH**  
2.08

**Melting point**  
307.40 - 309.20 °F (153 - 154 °C)

**Freezing point**  
Not available

**Boiling point**  
347.00 °F (175 °C) (Decomposes)

**Pour point**  
Not available

**Evaporation rate**  
Not available

**Flash point**  
Not available

**Auto-ignition temperature**  
1850.00 °F (1010 °C)

**Flammability limits in air, lower, % by volume**  
8

**Flammability limits in air, upper, % by volume**  
Not available

**Vapor pressure**  
0

**Vapor density**  
Not available

**Specific gravity**  
1.67 @ 20°C

**Relative density**  
1.665 g/cm3

**Octanol/water coefficient**  
-1.72 At 20 °C

**Solubility (H2O)**  
Complete

**Viscosity**  
Not available

**Percent volatile**  
0

**Molecular weight**  

10. Stability and Reactivity

**Reactivity**  
Reacts vigorously with alkaline material.

**Possibility of hazardous reactions**  
Hazardous polymerization does not occur.

**Chemical stability**  
Stable under recommended storage conditions.

**Conditions to avoid**  
Do not mix with other chemicals.

**Incompatible materials**  
This product is incompatible with nitrates. Oxidizers. Reducing agents. Strong bases.

**Hazardous decomposition products**  
May include and are not limited to: Oxides of carbon.

11. Toxicological Information

**Component analysis - LC50**

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid</td>
<td>Not available</td>
</tr>
</tbody>
</table>

**Component analysis - Oral LD50**

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid</td>
<td>5040 mg/kg mouse; 3000 mg/kg rat</td>
</tr>
</tbody>
</table>

**Effects of acute exposure**

<table>
<thead>
<tr>
<th>Eye</th>
<th>May cause severe irritation or chemical burns.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>May cause severe irritation or chemical burns.</td>
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<td>Inhalation</td>
<td>Dust may cause respiratory tract irritation or chemical burns.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.</td>
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</table>
12. Ecological Information

Ecotoxicity
Components of this product have been identified as having potential environmental concerns.

Ecotoxicity - Freshwater Fish - Acute Toxicity Data
Citric acid 77-92-9 96 Hr LC50 Lepomis macrochirus: 1516 mg/L [static]

Ecotoxicity - Water Flea - Acute Toxicity Data
Citric acid 77-92-9 72 Hr EC50 Daphnia magna: 120 mg/L

Persistence / degradability
Not available

Bioaccumulation / accumulation
Not available

Mobility in environmental media
Not available

Environmental effects
Not available

Aquatic toxicity
Not available

Partition coefficient
-1.72 At 20 °C

Chemical fate information
Not available

Other adverse effects
Not available

13. Disposal Considerations

Disposal instructions
Review federal, state/provincial, and local government requirements prior to disposal.

Waste from residues / unused products
Not available

Contaminated packaging
Not available

14. Transport Information

U.S. Department of Transportation (DOT)
Not regulated as dangerous goods.

Transportation of Dangerous Goods (TDG - Canada)
Not regulated as dangerous goods.

15. Regulatory Information

Canadian federal regulations
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canada - WHMIS - Ingredient Disclosure List
Citric acid 77-92-9 1 %

WHMIS status
Controlled

WHMIS classification
Class E - Corrosive Material

WHMIS labeling

Occupational Safety and Health Administration (OSHA)
29 CFR 1910.1200 hazardous chemical
Yes
**US Federal regulations**
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**CERCLA (Superfund) reportable quantity**
Acetaldehyde: 1000.0000

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

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

- **Section 302 extremely hazardous substance**
  - No

- **Section 311 hazardous chemical**
  - Yes

**Clean Water Act (CWA)**
Not available

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

**Inventory name**

<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 (NDSL)</td>
<td>No</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)

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**Disclaimer**
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.

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**Effective date**
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**Expiry date**
01-Dec-2013

**Prepared by**
Dell Tech Laboratories Ltd. (519) 858-5021

**Other information**
For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.