SAFETY DATA SHEET
Finish Dishwasher Cleaner - All Variants

1. Product and company identification

Product name: Finish Dishwasher Cleaner - All Variants

Distributed by: Reckitt Benckiser LLC.
Morris Corporate Center IV
399 Interpace Parkway (P.O. Box 225)
Parsippany, New Jersey 07054-0225
+1 973 404 2600

Emergency telephone number (Medical): 1-800-338-6167
Emergency telephone number (Transport): 1-800-424-9300 (U.S. & Canada) CHEMTREC
Outside U.S. and Canada (North America), call Chemtrec:703-527-3887
Website: http://www.rbnainfo.com

Product use: Machine Cleaner

This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is greater potential for large-scale or prolonged exposure, in accordance with the requirements of USDOL Occupational Safety and Health Administration.

This SDS is not applicable for consumer use of our products. For consumer use, all precautionary and first aid language is provided on the product label in accordance with the applicable government regulations, and shown in Section 15 of this SDS.

SDS #: D0038829v10.0_US
Formulation #: FF0256834v3.0 (Regular), FF8053895v1.0 (Lemon)

2. Hazards identification

Classification of the substance or mixture:
- SKIN CORROSION/IRRITATION - Category 2
- SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 72.1%

GHS label elements
Hazard pictograms:

Signal word: Warning
Hazard statements: Causes serious eye irritation.
Causes skin irritation.

Precautionary statements

Code #: D0038829v10.0_US
SDS #: D0038829v10.0_US
Date of issue: 25/09/2014.
2. Hazards identification

General: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention: Wear protective gloves. Wear eye or face protection. Wash hands thoroughly after handling.

Response: IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention. 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 attention.

Storage: Not applicable.

Disposal: Not applicable.

Supplemental label elements: None known.

Hazards not otherwise classified: None known.

3. Composition/information on ingredients

Substance/mixture: Mixture

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid</td>
<td>15-30</td>
<td>77-92-9</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Description of necessary first aid measures

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Skin contact: Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention.

Ingestion: Wash out mouth with water. Remove dentures if any. Move to fresh air. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Most important symptoms/effects, acute and delayed

Potential acute health effects
4. First aid measures

**Eye contact**: Causes serious eye irritation.

**Inhalation**: No known significant effects or critical hazards.

**Skin contact**: Causes skin irritation.

**Ingestion**: Irritating to mouth, throat and stomach.

**Over-exposure signs/symptoms**

**Eye contact**: Adverse symptoms may include the following:
- pain or irritation
- watering
- redness

**Inhalation**: No specific data.

**Skin contact**: Adverse symptoms may include the following:
- irritation
- redness

**Ingestion**: No specific data.

**Indication of immediate medical attention and special treatment needed, if necessary**

**Notes to physician**: Treat symptomatically.

**Specific treatments**: No specific treatment.

**Protection of first-aiders**: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

5. Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing media**: Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media**: None known.

**Specific hazards arising from the chemical**

**Hazardous thermal decomposition products**: Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- sulfur oxides
- metal oxide/oxides

**Special protective actions for fire-fighters**: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters**: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel**

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders**

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

**Small spill**

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill**

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## 7. Handling and storage

### Precautions for safe handling

**Protective measures**

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Conditions for safe storage, including any incompatibilities**

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
8. Exposure controls/personal protection

**Control**

**Occupational exposure limits**

Not applicable.

**Appropriate engineering controls**

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

**Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

**Skin protection**

**Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection**

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

9. Physical and chemical properties

**Appearance**

**Physical state**

Liquid.

**Color**

Blue. or Yellow.

**Odor**

Not available.

**Odor threshold**

Not available.

**pH**

0.095 to 1.25

**Melting point**

Not available.

**Boiling point**

Not available.

**Flash point**

Open cup: Not applicable.
9. Physical and chemical properties

- **Evaporation rate**: Not available.
- **Flammability (solid, gas)**: Not available.
- **Lower and upper explosive (flammable) limits**: Not available.
- **Vapor pressure**: Not available.
- **Vapor density**: Not available.
- **Relative density**: Not available.
- **Solubility**: Easily soluble in the following materials: cold water.
- **Partition coefficient: n-octanol/water**: Not available.
- **Auto-ignition temperature**: Not available.
- **Decomposition temperature**: Not available.
- **Viscosity**: Not available.

10. Stability and reactivity

- **Reactivity**: No specific test data related to reactivity available for this product or its ingredients.
- **Chemical stability**: The product is stable.
- **Possibility of hazardous reactions**: Under normal conditions of storage and use, hazardous reactions will not occur. Polymerization. There are no data available on the mixture itself.
- **Conditions to avoid**: No specific data.
- **Incompatible materials**: Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis. Do not mix with household chemicals.
- **Hazardous decomposition products**: Hazardous decomposition products: carbon oxides, Various Organic chemicals.

11. Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity**
    | Product/ingredient name | Result       | Species | Dose  | Exposure |
    |--------------------------|--------------|---------|-------|----------|
    | Citric acid              | LD50 Oral    | Rat     | 3 g/kg| -        |
  - **Irritation/Corrosion**
    | Product/ingredient name | Result               | Species | Score | Exposure       | Observation |
    |--------------------------|----------------------|---------|-------|----------------|-------------|
    | Citric acid              | Eyes - Severe irritant | Rabbit  | -     | 24 hours 750 Micrograms | -          |
    |                          | Skin - Mild irritant | Rabbit  | -     | 24 hours 500 milligrams | -          |
    |                          | Skin - Moderate irritant | Rabbit  | -     | 0.5 Milliliters | -          |
  - **Sensitization**
    Not available.
  - **Mutagenicity**
    Not available.
  - **Carcinogenicity**
    Not available.

11. Toxicological information

**Reproductive toxicity**
Not available.

**Teratogenicity**
Not available.

**Specific target organ toxicity (single exposure)**
Not available.

**Specific target organ toxicity (repeated exposure)**
Not available.

**Aspiration hazard**
Not available.

Information on the likely routes of exposure: Not available.

**Potential acute health effects**

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Irritating to mouth, throat and stomach.</td>
</tr>
</tbody>
</table>

**Symptoms related to the physical, chemical and toxicological characteristics**

<table>
<thead>
<tr>
<th>Route</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact</td>
<td>Adverse symptoms may include the following: pain or irritation, watering, redness</td>
</tr>
<tr>
<td>Inhalation</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Adverse symptoms may include the following: irritation, redness</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential immediate</td>
<td></td>
</tr>
<tr>
<td>potential delayed effects</td>
<td></td>
</tr>
</tbody>
</table>

**Long term exposure**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential immediate</td>
<td></td>
</tr>
<tr>
<td>potential delayed effects</td>
<td></td>
</tr>
</tbody>
</table>

**Potential chronic health effects**

Not available.

<table>
<thead>
<tr>
<th>Effect</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>
11. Toxicological information

Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>3343.9 mg/kg</td>
</tr>
</tbody>
</table>

12. Ecological information

Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid</td>
<td>Acute LC50 160000 µg/l Marine water</td>
<td>Crustaceans - Carcinus maenas - Adult</td>
<td>48 hours</td>
</tr>
</tbody>
</table>

Persistence and degradability

Not available.

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid</td>
<td>-1.8</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

Mobility in soil

Soil/water partition coefficient (K<sub>OC</sub>) : Not available.

Other adverse effects

No known significant effects or critical hazards.

Release of large quantities into water may cause a pH-change resulting in danger for aquatic life.

13. Disposal considerations

Disposal methods: Waste packaging should be recycled. Waste must be disposed of in accordance with federal, state and local environmental control regulations.
14. Transport information

Not a DOT controlled material (United States). Not a TDG-controlled material. This preparation is not classified as dangerous according to international transport regulations (ADR/RID, IMDG or ICAO/IATA).

15. Regulatory information

U.S. Federal regulations
- TSCA 8(a) CDR Exempt/Partial exemption: Not determined
- United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)
- Not listed

Clean Air Act Section 602 Class I Substances
- Not listed

Clean Air Act Section 602 Class II Substances
- Not listed

DEA List I Chemicals (Precursor Chemicals)
- Not listed

DEA List II Chemicals (Essential Chemicals)
- Not listed

SARA 302/304
Composition/information on ingredients
No products were found.

SARA 304 RQ
- Not applicable.

SARA 311/312
Classification
- Immediate (acute) health hazard

Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Fire hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
</tr>
</thead>
</table>

State regulations
- Massachusetts: None of the components are listed.
- New York: None of the components are listed.
- New Jersey: The following components are listed: PROPYLENE GLYCOL; 1,2-PROPANEDIOL
- Pennsylvania: The following components are listed: 1,2-PROPANEDIOL

Label elements
- Code #: D0038829v10.0_US
- SDS #: D0038829v10.
- Date of issue: 25/09/2014.
15. Regulatory information

Signal word: CAUTION
Hazard statements: CAUSES EYE IRRITATION.
Precautionary measures: Avoid contact with eyes.

16. Other information

Hazardous Material Information System (U.S.A.)

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical hazards</th>
<th>Personal protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>B</td>
</tr>
</tbody>
</table>

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Date of issue: 25/09/2014.
Date of previous issue: 25/09/2014.
Version: 10
Prepared by: Reckitt Benckiser LLC.
Product Safety Department
1 Philips Parkway
Montvale, New Jersey 07646-1810 USA.
FAX: 201-476-7770

Indicates information that has changed from previously issued version.

Notice to reader
16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

RB is a member of the CSPA Product Care Product Stewardship Program.