# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

| | |
|---|---|
| **Product Name** | **Betco BetONE RTU Disinfectant** |
| **CAS #** | Mixture |
| **Product use** | Disinfectant |
| **Manufacturer** | Betco Corporation<br>**1001 Brown Avenue**<br>**Toledo, Ohio 43607**<br>**Phone: 1-888-462-3826** |

## 2. Hazards Identification

| | |
|---|---|
| **Emergency overview** | DANGER<br>FLAMMABLE LIQUID AND VAPOR.<br>CAUSES EYE AND SKIN IRRITATION. |
| **Potential short term health effects** | |
| **Routes of exposure** | Eye, Skin contact, Inhalation, Ingestion. |
| **Eyes** | Moderately irritating to the eyes based on test data. |
| **Skin** | May be slightly irritating to skin based on test data. |
| **Inhalation** | May cause respiratory tract irritation. |
| **Ingestion** | May cause stomach distress, nausea or vomiting. |
| **Target organs** | Blood. Eyes. Liver. Respiratory system. Skin. |
| **Chronic effects** | Prolonged or repeated exposure can cause drying, defatting and dermatitis. |
| **Signs and symptoms** | Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. |
| **OSHA Regulatory Status** | This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. |
| **Potential environmental effects** | Components of this product have been identified as having potential environmental concerns. |

## 3. Composition / Information on Ingredients

| Ingredient(s) | CAS # | Percent |
|---|---|---|
| Ethanol | 64-17-5 | 60 - 80 |

## 4. First Aid Measures

| | |
|---|---|
| **First aid procedures** | |
| **Eye contact** | Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists. |
| **Skin contact** | Immediately flush with cool water for 15 minutes while removing contaminated clothing and shoes. Discard or wash well before reuse. Obtain medical attention if irritation persists. |
| **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. |
| **Notes to physician** | Symptoms may be delayed. |
| **General advice** | Keep away from sources of ignition. No smoking. 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** | Flammable by OSHA criteria. Containers may explode when heated. |

**Extinguishing media**

**Suitable extinguishing media** Small Fires: Dry chemical, CO2, water spray or regular foam.

Large Fires: Water spray, fog or regular foam.

**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** Not available

**Methods for containment** Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.

**Methods for cleaning up** Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills to original containers for re-use.

## 7. Handling and Storage

**Handling** Keep container tightly closed.
Use only with adequate ventilation. Use good industrial hygiene practices in handling this material. When using do not eat or drink. Avoid contact with eyes. Avoid contact with skin and clothing. Wash thoroughly after handling.

**Storage** Keep out of reach of children.
Do not store at temperatures above 120°F (49°C). Keep away from heat, sparks, and flame. Store in a closed container away from incompatible materials.

## 8. Exposure Controls / Personal Protection

**Exposure limits**

| Ingredient(s) | Exposure Limits |
|---|---|
| Ethanol | **ACGIH-TLV**<br>TWA: 1000 ppm<br>STEL: 1000 ppm<br>**OSHA-PEL**<br>TWA: 1000 ppm |

**Engineering controls** General ventilation normally adequate.

**Personal protective equipment**

**Eye / face protection** Wear safety glasses with side shields.

**Hand protection** Rubber gloves. Confirm with a reputable supplier first.

**Skin and body protection** As required by employer code.

**Respiratory protection** Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

## 9. Physical and Chemical Properties

**Appearance** Clear

**Color** Colorless

**Form** Liquid

| | |
|---|---|
| **Odor** | Alcohol |
| **Odor threshold** | Not available |
| **Physical state** | Liquid |
| **pH** | 3.7 @ 77°F |
| **Freezing point** | Not available |
| **Boiling point** | Not available |
| **Pour point** | Not available |
| **Evaporation rate** | Not available |
| **Flash point** | 65.30 °F (18.5 °C) Tag Closed Cup |
| **Auto-ignition temperature** | Not available |
| **Flammability limits in air, lower, % by volume** | Not available |
| **Flammability limits in air, upper, % by volume** | Not available |
| **Vapor pressure** | Not available |
| **Vapor density** | Not available |
| **Specific gravity** | Not available |
| **Relative density** | 0.8562 |
| **Octanol/water coefficient** | Not available |
| **Viscosity** | 3.2345 cSt @ 68°F |

## 10. Stability and Reactivity

| | |
|---|---|
| **Reactivity** | Not available |
| **Possibility of hazardous reactions** | Not available |
| **Chemical stability** | Stable under recommended storage conditions. |
| **Conditions to avoid** | Avoid high temperatures. Do not mix with other chemicals. |
| **Incompatible materials** | Not available |
| **Hazardous decomposition products** | May include and are not limited to: Oxides of carbon. |

## 11. Toxicological Information

**Component analysis - LC50**

| Ingredient(s) | LC50 |
|---|---|
| Ethanol | 31623 ppm rat |

**Component analysis - Oral LD50**

| Ingredient(s) | LD50 |
|---|---|
| Ethanol | 3450 mg/kg mouse; 7060 mg/kg rat |

**Effects of acute exposure**

| | |
|---|---|
| **Eye** | Moderately irritating to the eyes based on test data. |
| **Skin** | May be slightly irritating to skin based on test data. |
| **Inhalation** | May cause respiratory tract irritation. |
| **Ingestion** | May cause stomach distress, nausea or vomiting. |
| **Sensitization** | Non-hazardous by OSHA criteria. |
| **Chronic effects** | Non-hazardous by OSHA criteria. |
| **Carcinogenicity** | Hazardous by OSHA criteria. |

**ACGIH - Threshold Limit Values - Carcinogens**

| | | |
|---|---|---|
| Ethanol | 64-17-5 | A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans |

| | |
|---|---|
| **Mutagenicity** | Non-hazardous by OSHA criteria. |
| **Reproductive effects** | Hazardous by OSHA criteria. |
| **Teratogenicity** | Non-hazardous by OSHA criteria. |

**Name of Toxicologically Synergistic Products** Not available

## 12. Ecological Information

**Ecotoxicity** See below

**Ecotoxicity - Freshwater Fish - Acute Toxicity Data**

| | | |
|---|---|---|
| Ethanol | 64-17-5 | 96 Hr LC50 Oncorhynchus mykiss: 12.0 - 16.0 mL/L [static]; 96 Hr LC50 Pimephales promelas: >100 mg/L [static]; 96 Hr LC50 Pimephales promelas: 13400 - 15100 mg/L [flow-through] |

**Ecotoxicity - Water Flea - Acute Toxicity Data**

| | | |
|---|---|---|
| Ethanol | 64-17-5 | 48 Hr LC50 Daphnia magna: 9268 - 14221 mg/L; 24 Hr EC50 Daphnia magna: 10800 mg/L; 48 Hr EC50 Daphnia magna: 2 mg/L [Static] |

**Persistence / degradability** Not available

**Bioaccumulation / accumulation** Not available

**Mobility in environmental media** Not available

**Environmental effects** Not available

**Aquatic toxicity** Not available

**Partition coefficient** Not available

**Chemical fate information** Not available

## 13. Disposal Considerations

**Disposal instructions** Dispose in accordance with all applicable regulations.

**Waste from residues / unused products** Not available

**Contaminated packaging** Not available

## 14. Transport Information

**U.S. Department of Transportation (DOT)**

**Basic shipping requirements:**

**Proper shipping name** Ethanol

**Hazard class** 3

**UN number** UN1170

**Packing group** II

**Additional information:**

**Special provisions** 24, IB2, T4, TP1

**Packaging exceptions** <0.3 Gallons - Consumer Commodity ORM-D

**ERG number** 127

## 15. Regulatory Information

**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.

**U.S. - CAA (Clean Air Act) - Reactivity Factors for VOCs in Aerosol Coatings**

| | | |
|---|---|---|
| Ethanol | 64-17-5 | 1.69 G Ozone/g VOC Reactivity Factor |

**U.S. - CAA (Clean Air Act) - Volatile Organic Compounds (VOCs) in SOCMI**

| | | |
|---|---|---|
| Ethanol | 64-17-5 | Present |

**CERCLA (Superfund) reportable quantity**

None

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

| | |
|---|---|
| **Hazard categories** | Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes 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** | WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. |

**U.S. - Massachusetts - Right To Know List**

| | | |
|---|---|---|
| Ethanol | 64-17-5 | Teratogen |

**U.S. - Minnesota - Hazardous Substance List**

| | | |
|---|---|---|
| Ethanol | 64-17-5 | Present |

**U.S. - New Jersey - Right to Know Hazardous Substance List**

| | | |
|---|---|---|
| Ethanol | 64-17-5 | sn 0844 |

**U.S. - Pennsylvania - RTK (Right to Know) List**

| | | |
|---|---|---|
| Ethanol | 64-17-5 | Present |

**U.S. - Rhode Island - Hazardous Substance List**

| | | |
|---|---|---|
| Ethanol | 64-17-5 | Toxic; Flammable |

**Inventory status**

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|---|---|---|
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

A 'Yes' indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

## 16. Other Information

LEGEND
HMIS/NFPA

| | |
|---|---|
| Severe | 4 |
| Serious | 3 |
| Moderate | 2 |
| Slight | 1 |
| Minimal | 0 |

| | |
|---|---|
| Health * | 1 |
| Flammability | 3 |
| Physical Hazard | 0 |
| Personal Protection | X |

**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.

| | |
|---|---|
| **Issue date** | 7-Nov-2013 |
| **Effective date** | 1-Nov-2013 |
| **Prepared by** | Betco Corporation |
| **Other information** | For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document. |

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.