# MATERIAL SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Speed-Clean
Product Description: Sterilizer Cleaner
Chemical Family: Phosphate

**DEVELOPED FOR:**
Midmark Corporation
60 Vista Drive
P.O. Box 286
Versailles, Ohio 45380-0286

**EMERGENCY TELEPHONE NUMBERS:**
Telephone: (937) 526-8498

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

| | wt% | CAS Registry # |
|---|---|---|
| Water | 80 - 90% | 7732-18-5 |
| 2-Butoxyethanol | <6% | 111-76-2 |
| Tetrapotassium pyrophosphate | <5% | 7320-34-5 |
| Ethoxylated alcohols phosphate ester | <4% | 68130-47-2 |
| Tergitol NP-33 | ≤1% | 9016-45-9 |

**OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):**

CHEMICAL COMPOSITION/HAZARDOUS INGREDIENTS/OCCUPATIONAL EXPOSURE LIMITS Exposure limits are time weighted averages (TWA), short-term exposure limits (STEL) and ceiling (C) and are included if established.

| INGREDIENT | ACGIH TLV | OSHA PEL | IDLH | STEL | NIOSH REL |
|---|---|---|---|---|---|
| Water | Not Established | Not Established | Not Established | Not Established | Not Established |
| 2-Butoxyethanol | 20 ppm | 50 ppm | 700 ppm | Not Established | 5 ppm |
| Tetrapotassium pyrophosphate | Not Established | Not Established | Not Established | Not Established | Not Established |
| Ethoxylated alcohols phosphate ester | Not Established | Not Established | Not Established | Not Established | Not Established |
| Tergitol NP-33 | Not Established | Not Established | Not Established | Not Established | Not Established |

## 3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

HMIS/NFPA classification for liquid product as shipped
Health = 2 , Flammability = 0 , Reactivity = 0 , PPE = See Section 8

**POTENTIAL HEALTH EFFECTS**

Prolonged or repeated skin contact with material may cause a mild dermatitis in some individuals. Ingestion of the material may cause irritation to the gastrointestinal tract. May cause irritation, redness and corneal injury if splashed into the eyes.

**SIGNS AND SYMPTOMS OF OVEREXPOSURE**

EYES: Contact may cause irritation, discomfort, redness, stinging, tearing and/or pain.

SKIN: May cause irritation, itching, redness, dryness, and/or pain.
INGESTION: Swallowing may cause gastric irritation which would include nausea, vomiting and abdominal pain.

INHALATION: May cause irritation to respiratory tract, nose, and throat. Symptoms may include coughing, headache, nausea, vomiting, and low blood pressure.

ACUTE EFFECTS: Short-term exposures may cause headaches, coughing, wheezing, shortness of breath, nasal irritation, and dermatitis.

CHRONIC EFFECTS: Prolonged exposure may cause kidney, liver and central nervous system damage.

TARGET ORGANS: Eyes, skin, kidneys, central nervous system, liver, blood.

CANCER STATEMENT:
2-Butoxyethanol: IARC-3 (Unclassifiable as to Carcinogenicity to Humans)
EPA-C (Possible Human Carcinogen)

All other materials are not listed on EPA, NTP, IARC, ACGIH or OSHA as carcinogenic.

## 4. FIRST AID MEASURES

EYES: Immediately flush eyes with water for 15 minutes, intermittently lifting the lower and upper eyelids. If irritation persists, seek immediate medical attention.

SKIN: Flush skin with running water for 15 minutes. Launder clothes before reuse. Seek medical attention if irritation persists.

INGESTION: Never give anything by mouth to an unconscious person. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. DO NOT induce vomiting. If vomiting occurs, keep victim's head lower than hips to avoid aspiration. Seek medical attention immediately.

INHALATION: Move person to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, administer oxygen. DO NOT use mouth-to-mouth resuscitation. If symptoms persist or develop, obtain immediate medical attention.

## 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Material is non-flammable. Water may be used to fight a fire however, use extinguishing media that is appropriate for the surrounding materials.

HAZARDOUS COMBUSTION PRODUCTS: Non-flammable

EXPLOSION HAZARDS: None known.

FIRE FIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance. Contact professional fire fighter immediately.

FIRE FIGHTING EQUIPMENT: Fire fighters should wear proper protective equipment including self-contained breathing apparatus (SCBA) with full face-piece operated in positive pressure mode, NIOSH approved, and full protective gear.

| | |
|---|---|
| Flashpoint | >200° Fahrenheit |
| UEL | N/A |
| LEL | N/A |
| Vapor Pressure | N/A |

## 6. ACCIDENTAL RELEASE MEASURES

Don appropriate personal protective equipment then take immediate steps to stop and contain the spill. Contain and recover liquid when possible. Collect material in an appropriate container or absorb with an inert material (vermiculite, dry sand, earth), and place in a chemical waste container. Provide adequate ventilation, a vapor suppressing foam may reduce vapors. Flush cleaned area with water.

## 7. HANDLING AND STORAGE

GENERAL PROCEDURES: Store in a clean, dry, well ventilated area away from incompatible materials (see section 10). Keep containers closed when not in use. Empty containers may contain residues; therefore, use the same caution when handling empty containers as handling the product. Use product in a well-ventilated area.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use in an area with adequate ventilation. If material is irritating to the respiratory tract or exceeds the TWA, then proper respiratory protection should be worn (see RESPIRATORY below).

PERSONAL PROTECTION

EYES AND FACE: Wear splash goggles and face shield if splashing is possible during use. Follow guidelines by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN 166.

SKIN: Prevent skin contact. Wear impervious clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

RESPIRATORY: Respiratory protection may not be required where adequate ventilation conditions exist. If vapors exist above the PEL or OEL, a NIOSH-approved respirator is recommended. If respiratory protection is required, a respiratory program including selection, fit testing, training, maintenance and inspection should be implemented. It should meet OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149.

PROTECTIVE CLOTHING: Most materials commonly used in protective clothing are sufficient. All contaminated clothing should be removed before leaving the work area and laundered prior to re-use.

WORK HYGIENIC PRACTICES: Do not eat, drink, or smoke in work area. Always wash hands after handling this material. Maintain good housekeeping.

OTHER USE PRECAUTIONS: Eyewash stations and emergency showers should be located in or around areas using or storing material.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Color:
Physical State: Liquid
Odor:
pH: 8.01

**2-Butoxyethanol**
Boiling Point: 339 °F
Freezing Point: -107 °F
Solubility in Water: Miscible

pH: Not available
Specific Gravity: 0.90
Molecular Weight: 118.2

**Tetrapotassium Pyrophosphate**
Boiling Point: Decomposes
Freezing Point: N/A
Solubility in Water: Easily soluble in water

pH: 10
Specific Gravity: 2.33
Molecular Weight: 330.34

**Ethoxylated alcohols phosphate ester**
Boiling Point: N/A
Freezing Point: N/A
Solubility in Water: N/A

pH: N/A
Specific Gravity: N/A
Molecular Weight: N/A

## 10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMER: Will not occur

CONDITIONS TO AVIOD: Heat and Ignition Sources

HAZARDOUS DECOMPOSITION: Carbon monoxide, carbon dioxide, oxides of phosphorus, and irritating fumes and gases.

INCOMPATIBLE MATERIALS: Strong oxidizing agents, acids, ammonia, organic amines, chlorates, chlorine, and reducing agents.

## 11. TOXICOLOGICAL INFORMATION

TERATOLOGY: No information available

REPRODUCTION: High doses of 2-Butoxyethanol may cause reproductive problems and birth defects in animals.

MUTAGENICITY: No information available

2-Butoxyethanol
Acute Dermal Toxicity – (rabbit) $LD_{50}$ = 100-610 mg/kg
Acute Inhalation Toxicity – (rat) $LC_{50}$ = 450-486 ppm (4H)
Acute Oral Toxicity – (rat) $LD_{50}$ = 530-3000 mg/kg

## 12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION:

2-Butoxyethanol
Acute/Prolonged Toxicity to Fish – (oyster) 4d $LC_{50}$ = 89 mg/L
Acute Toxicity to Aquatic Invertebrates – (*Daphnia*) 2d $LC_{50}$ = 835 mg/L
Toxicity to Aquatic Plants – (algae) 7d $EC_{50}$ > 1000 mg/L
Chronic Toxicity to Fish – (Flathead minnow) 32d MATC = 135 mg/L
Fate: In the air this material is expected to readily degrade. Not expected to be toxic to aquatic life.

Tetrapotassium pyrophosphate
Acute Toxicity to Fish – (Zebra Mussel) 24h $LC_{50}$ = 72 mg/L

## 13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Disposal must be in accordance with applicable federal, state and local governmental regulations. Recycling of the material is preferred.

PRODUCT DISPOSAL: A RCRA approved waste facility needs to determine if the discarded chemical is classified as a hazardous waste. Refer to US EPA guidelines for the classification listed in 40 CFR 261.3.

EMPTY CONTAINER: Empty containers may contain residue. Use safety measures when handling empty containers.

GENERAL COMMENTS: Recovery and recycling of the materials is preferred.

## 14. TRANSPORT INFORMATION

SPECIAL SHIPPING NOTES: This product is not regulated by the Department of Transportation

RCRA P-Series: None listed
RCRA U-Series: None listed

## 15. REGULATORY INFORMATION

CERCLA (COMPREHENSIVE EMERGENCY RESPONSE, COMPENSATION, AND LIABILITY ACT): None are found CERCLA Priority List of Hazardous Chemicals, or on the EPA List of Lists (EPCRA) list.

TSCA (TOXIC SUBSTANCE CONTROL ACT)
TSCA Regulatory: 2-Butoxyethanol; Tergitol NP-33; & Tetrapotassium pyrophosphate are listed on the TSCA list.

RCRA STATUS: None are found on RCRA P-Series or U-Series.

CLEAN WATER ACT: None of the components are listed as a Priority Pollutant or a Toxic Pollutant under the Clean Water Act.

CANADA:
All components are found on the DSL/NDSL list.

## 16. OTHER INFORMATION

REVISION INFORMATION:

Approved by: Environmental Compliance Manager
Approval date: June 2007

REFERENCES:

1. 2005 National Institute of Occupational Safety and Health (NIOSH) Pocket Guide to Chemical Hazards
2. 2007 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, ACGIH
3. Department of Transportation Emergency Response Guidebook –2004
4. Code of Federal Regulation (CFR) 29, 40, and 49
5. Toxnet online database
6. Mallinckrodt Baker, Inc. online MSDS database
7. NTP online toxicology database
8. CDC.gov website for toxicological data
9. EPA Title III List of Lists – 2001
10. Toxic Substance Control Act Chemical Inventory List
11. Pesticide Action Network – Pesticide Database
12. International Programme on Chemical Safety, INCHEM website

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