# SAFETY DATA SHEET

## 1. Identification

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|---|---|
| **Product identifier** | **Brute Force** |
| **Other means of identification** | |
| **Product code** | |
| **Recommended use** | Cleaner |
| **Recommended restrictions** | None known. |

**Manufacturer/Importer/Supplier/Distributor information**

| | | |
|---|---|---|
| **Company name** | Brute Products | |
| **Address** | 4449 Custer Street<br>Manitowoc, WI 54220<br>United States | |
| **Telephone** | 1-800-752-8141 | |
| **Website** | www.bruteusa.com | |
| **Emergency phone number** | EMERGENCY 24 Hrs. | 800-424-9300 ChemTrec |

## SECTION 2 HAZARDS IDENTIFICATION

GHS Classification:

**Warning**

Skin Irritation (Category 2)
Eye Irritation (Category 2A)
Aquatic Chronic Toxicity (Category 3)

GHS Hazard Statements:

Causes skin irritation
Causes serious eye irritation
Harmful to aquatic life with long lasting effects

GHS Precautionary Statements:

Prevention:

Wash hands/skin thoroughly after handling.

Wear protective gloves / eye protection / face protection.

Avoid release to the environment.

(Keep out of reach of children.)

Response:

If on skin: Wash with plenty of water / soap.

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.

If eye irritation persists: Get medical advice / attention.

Take off contaminated clothing and wash it before reuse.

Collect spillage.

Storage:

None.

Disposal:

Dispose of contents / container in accordance with local / regional / national / international regulations.

Hazards Not Otherwise Classified:

None.

## SECTION 2 HAZARDS IDENTIFICATION

GHS Assessment:

Approximately 0% of this mixture consists of ingredient(s) of unknown acute toxicity.

Approximately 0% of the mixture consists of ingredient(s) of unknown hazards to the aquatic environment.

## SECTION 3 COMPOSITION / INGREDIENTS

| Component | CAS Number | EC Number | Concentration |
|---|---|---|---|
| Water | 7732-18-5 | 231-791-2 | 80.0 - 95.0% |
| Butoxyethanol, 2- | 111-76-2 | 203-905-0 | 5.0 - 10.0% |
| Nonylphenol ethoxylate | 9016-45-9 | 500-024-6 | 1.0 - 5.0% |
| Tetrasodium pyrophosphate | 7722-88-5 | 231-767-1 | 1.0 - 5.0% |

Trade Secret Claims: Specific chemical identity and / or exact percentage (concentration) of components has been withheld as a trade secret.

## SECTION 4 FIRST AID MEASURES

First Aid - Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention, if irritation develops .

First Aid - Skin: In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately if irritation develops and/or persists. Wash contaminated clothing before reuse.

First Aid - Ingestion: If swallowed and feel unwell, call a physician or poison control center. DO NOT induce vomiting unless directed to do so by a physician or poison control center. If victim is fully conscious, give a cupful of water. Never give anything bymouth to an unconscious person.

First Aid - Inhalation: If respiratory symptoms or other symptoms of exposure develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek immediate medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered byqualified personnel. Seek immediate medical attention.

Important Symptoms / Effects - Acute and Delayed: Tissue inflammation, tissue redness.

Advice to Physician: Treat symtomatically.

## SECTION 5 FIRE FIGHTING MEASURES

Extinguishing Media: Treat surrounding material Water spray, dry chemical, carbon dioxide, or foam is recommended. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Specific Hazards: This product is not flammable. This product may give rise to hazardous vapors in a fire. Vapors/fumes may be irritating, corrosive and/or toxic.

Protective equipment and procedures for fire-fighters. Wear full protective clothing and self-contained breathing apparatus .

Additional Advice: None.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

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|---|---|
| Spill Procedures: | Wipe up spills with an absorbent towel/material and transfer into suitable containers for recovery or disposal. Finally flush area with water. |
| Personal Precautions: | Wear suitable protective clothing and equipment. |
| Environmental Precautions: | Prevent the material from entering drains or water courses. Do not discharge directly to a water source. Advise Authorities if spillage has entered watercourse or sewer or has contaminated soil or vegetation. |

## SECTION 7 HANDLING AND STORAGE

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| Handling: | Wear appropriate personal protection (See Section 8) when handling this material The work area should be equipped with a safety shower and eye wash station. If exposed to the liquid, avoid contact with skin and eyes. Wash thoroughly after handling. Avoid breathing mist or vapor. Use in a well-ventilated area. |
| Storage: | Keep container(s) tightly closed. Use and store this material at temperatures below 30°C (86°F) away from heat, direct sunlight, and hot metal surfaces. Keep away from any incompatible materials (see Section 10). |
| Additional Advice: | Store in original container. Store as directed by the manufacturer. |

## SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational Exposure Exposure limits are listed below, if they exist.

Standards:

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|---|---|
| Water: | None. |
| Butoxyethanol, 2-: | ACGIH TLV: 20 ppm TWA.<br>EU: 20 ppm (98mg/m3) TWA.<br>EU: 50 ppm (246mg/m3) STEL.<br>UK: 25 ppm TWA.<br>UK: 50 ppm STEL.<br>OSHA PEL: 50 ppm TWA. |
| Nonylphenol ethoxylate: | None. |
| Tetrasodium pyrophosphate: | ACGIH TLV: 5 mg/m3 TWA.<br>UK: 5 mg/m3 TWA. |
| Engineering Control Measures: | Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation {local exhaust), and control of process conditions. |
| Respiratory Protection: | A NIOSH certified self-contained breathing apparatus or air purifying respirator with an organic cartridge may be used under conditions where airborne concentrations are expected to exceed exposure limits. |
| Hand Protection: | The use of gloves impervious to the specific material handled is advised to prevent skin contact, possible irritation and skin damage (see glove manufacturer literature for information on permeability). |
| Eye Protection: | Approved eye protection (safety glasses with side-shields or goggles) to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary. |
| Body Protection: | Impervious clothing should be worn as needed to prevent skin contact. |

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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|---|---|
| Physical State: | Liquid |
| Color: | Clear, colorless |

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Odor: | Mild, ether-like |
| Odor Threshold: | 9.3 mg/l (butoxyethanol, 2-) |
| pH: | 10.8 |
| Melting Point / Range (°C/°F): | ca. 0°C / 32°F (water) |
| Boiling Point / Range (°C/°F): | 100°C / 212°F (water) |
| Flash Point (PMCC) (°C/°F): | > 94°C / 201.2°F |
| Evaporation Rate: | Not available. |
| Flammability/ Explosivity Limits in Air(%): | (butoxyethanol, 2-)<br>Lower flammable limit 1.1 vol% (93°C)<br>Upper flammable limit: 12.7 vol% (135°C) |
| Vapor Pressure: | 23.8 mmHg (25°C) (water)<br>0.88 mmHg (25°C) (butoxyethanol, 2-) |
| Vapor Density (Air == 1): | 4.1 (butoxyethanol, 2-) |
| Relative Density | 1.018 |
| Solubility in Water | Completely soluble. |
| Partition Coefficient: | Not available. |
| Autoignition Temperature (°C/°F): | > 238°C / 460.4°F |
| Decomposition Temperature ( °C/°F): | Not available. |
| Viscosity: | Not available. |
| Explosive Properties: | None. |
| Oxidizing Properties: | None. |
| Volatile Organic Content (VOC) (g/l): | 50 - 65 g/l (as defined by 40CFR51.100) |

## SECTION 10 STABILITY AND REACTIVITY

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|---|---|
| Reactivity: | Product will not undergo additional reaction. |
| Stability: | Stable under normal storage conditions. |
| Hazardous Polymerization: | Will not occur. |
| Conditions to Avoid: | Contact with incompatible materials, excessive heat(> 100°C). |
| Incompatibilities: | Strong oxidizing agents, strong bases. |
| Hazardous Decomposition Products: | Oxides of carbon, oxides of phosphorus, oxides of silicon, aliphatic and aromatic compounds, toxic by-products. |

## SECTION 11 TOXICOLOGICAL INFORMATION

*if available, toxicity data for the product is given; otherwise component data is listed.*

Acute Toxicity:

This product is not expected to be appreciably toxic.
(Water) No data.
(Butoxyethanol, 2-) Oral LD50 (rat) 1.48 g/kg; Dermal LDS0 (rabbit) 400 mg/kg; Inhalation LC50 (rat) 450-486 ppm/4 hr
(Nonylphenol ethoxylate) Oral LD50 (rat) 1310 mg/kg; Dermal LD50 (rabbit) 2000 mg/kg
(Tetrasodium pyrophosphate) Oral LD50 (rat) 300 - 2000 mg/kg; Dermal LD50 (rabbit) > 2000 mg/kg

## SECTION 11 TOXICOLOGICAL INFORMATION

| | |
|---|---|
| Skin Corrosion / Irritation: | The product may be irritating to the skin.<br>(Water) No data.<br>(Butoxyethanol, 2-) Slightly irritating to skin (rabbit).<br>(Nonylphenol ethoxylate) Severely irritating to skin (rabbit- analog/surrogate compound with EO chain length of 2 - 15). Irritation diminishes with increasing chain length.<br>(Tetrasodium pyrophosphate) Non-irritating to skin (rabbit). |
| Serious Eye Damage / Irritation: | The product may be severely irritating to the eyes.<br>(Water) No data.<br>(Butoxyethanol, 2-) Irritating to eyes (rabbit)<br>(Nonylphenol ethoxylate) Severely irritating to eye {rabbit- analog/surrogate compound).<br>(Tetrasodium pyrophosphate) Caused serious and irreversible effects (rabbit). |
| Respiratory or Skin Sensitization: | The product is not expected to be dermally sensitizing.<br>(Water) No data.<br>(Butoxyethanol, 2-) Not sensitizing in guinea pigs.<br>(Nonylphenol ethoxylate) Not dermally sensitizing (guinea pig - analog/ surrogate compound).<br>{Tetrasodium pyrophosphate) Not dermally sensitizing (mouse - analog/surrogate compound). |
| Mutagenicily: | This product is not expected to be mutagenic.<br>(Water) No data.<br>(Butoxyethanol, 2-) Generally not regarded as genotoxic.<br>(Nonylphenol ethoxylate) Not mutagenic (Ames est - analog/surrogate compound).<br>(Tetrasodium pyrophosphate) Not mutagenic (mammalian chromosome aberration test without metabolic activation). |
| Carcinogenicity: | This product is not expected to be carcinogenic<br>(Waler) No data.<br>(Butoxyethanol, 2-) In inhalation studies there was some evidence of carcinomas of the liver and stomach in mice. Studies on rats were equivocal. Not classified as carcinogenic in humans (IARC).<br>(Nonylphenol ethoxylate) No data.<br>(Tetrasodium pyrophosphate) No data. |
| Reproductive/ Developmental Toxicity: | This product is not expected to be developmentally harmful.<br>(Water) No data.<br>(Butoxyethanol, 2-) No adverse reproductive or developmental effects have been observed at less than toxic doses.<br>(Nonylphenol ethoxylate) No data.<br>(Tetrasodium pyrophosphate) No maternal or developmental toxicity was observed in pregnant mice at dose levels to 130 mg/kg over 10 days. |
| Chronic/Subchronic Toxicity: Specific Target Organ/Systemic Toxicity Single Exposure: | (Water) No data.<br>(Butoxyethanol, 2-) Significant changes to red blood cells have been observed in rats and mice.<br>(Nonylphenol ethoxylate) No data.<br>(Tetrasodium pyrophosphate) No data. |
| Chronic/Subchronic Toxicity: Specific Target Organ/Systemic Toxicity - Repeated Exposure: | (Water) No data.<br>(Butoxyethanol, 2-) Adverse effects on the central nervous system, kidneys and liver occur at higher exposure concentrations than do the blood effects in rats.<br>(Nonylphenol ethoxylate) No data.<br>(Tetrasodium pyrophosphate) In feeding studies rats exhibited kidney damage. |

## SECTION 11 TOXICOLOGICAL INFORMATION

Aspiration Hazard: This product does not pose an appreciable aspiration hazard.

Additional Information: None.

## SECTION 12 ECOLOGICAL INFORMATION

*If available, ecological data for the product is given; otherwise component data is listed.*

Acute Ecotoxicity:
This product may be harmful to aquatic species.
(Water) No data.
(Butoxyethanol. 2-) LC50 (Rainbow trout)> 1000 mg/1/96 hr; LC50 (Fathead minnow) 2137 mg/1/96 hr; LC5O (Daphnia magna) 1720 mg/1/24 hr.
(Nonylphenol ethoxylate) LC50 (Rainbow trout) 4.7 mg/1/96 hr; LC5O (Bluegill) 1.3 mg/1/96 hr; EC5O (Oaphnia magna) 14 mg/1/48 hr; LC50 (green algae) 12 mg/1/96 hr.
(Tetrasodium pyrophosphate) LC50 (Rainbow trout) > 100 mg/1/96 hr; EC50 (Daphnid) > 100 mg/1/48 hr; EC50 (algae)> 100 mg/l (data for analog/surrogate compound).

Mobility:
(Water) No data.
(Butoxyethanol, 2-) Expected to have high mobility based upon an estimated Koc of 67.
(Nonylphenol ethoxylate) Expected to have moderate mobility.
(Tetrasodium pyrophosphate) No data.

Persistence/Degradability:
(Water) No data.
(Butoxyethanol, 2-) Expected to rapidly degrade in water.
(Nonylphenol ethoxylate) Biodegradable (68% to 91 % degradation in 8-21 days).
(Tetrasodium pyrophosphate) No data.

Bioaccumulation:
(Water) No data.
(Butoxyethanol, 2-) An estimated BCF of 3 suggests the potential for bioconcentration in aquatic organisms is low.
(Nonylphenol ethoxylate) A BCF of less than 1.4 suggests bioconcentration in aquatic organisms is low.
(Tetrasodium pyrophosphate) No data.

Other adverse effects: None.

## SECTION 13 DISPOSAL CONSIDERATION

Environmental precautions: Prevent the material from entering drains or water courses. Do not discharge directly to a water source. Advise Authorities if spillage has entered watercourse or sewer or has contaminated soil or vegetation.

Product Disposal: Dispose in accordance with all local, state (provincial), and federal regulations. Under RCRA, it is the responsibility of the product's user to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because the product uses, transformations, mixtures, processes, etc. may render the resulting materials hazardous.

Container Disposal: Do not remove label until container is thoroughly cleaned. Empty containers may contain hazardous residues. This material and its container must be disposed of in a safe way.

## SECTION 14 TRANSPORT INFORMATION

DOT (US):

Proper Shipping Name: Not regulated

## SECTION 14 TRANSPORT INFORMATION

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|---|---|
| UN Number: | None. |
| Class: | None. |
| Packaging Group: | None. |
| Reportable Quantity: | None. |
| Marine Pollutant: | None. |

IATA:

| | |
|---|---|
| Proper Shipping Name: | Not regulated |
| UN Number: | None. |
| Class: | None. |
| Packing Group: | None. |

IMDG:

| | |
|---|---|
| Proper Shipping Name: | Not regulated |
| UN Number: | None |
| Class: | None. |
| Packing Group: | None |
| Marine Pollutant: | None. |

*Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations.*

## SECTION 15 REGULATORY INFORMATION

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| US Toxic Substance Control Act: | All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory. |
| Canadian Domestic Substance List: | All components of this product are listed on the Canadian Domestic Substance List. |
| EU REACh: | All components of this product have been pre-listed or registered under REACh. |
| TSCA Sec.12(b) Export Notification: | This product contains a chemical at or above de minimis concentrations which requires reporting:<br>- Nonylphenol ethoxylate (Proposed Section 5(a) SNUR - 40 CFR 721.10765; Federal Register Vol. 79, No. 190, Page 59186). |
| Canadian WHMIS Classification: | D.2.B<br>This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all of the information required by the CPR. |
| Massachusetts Right-To-Know: | This product contains materials subject to disclosure under the Massachusetts' Right-To-Know Law:<br>- Butoxyethanol, 2-<br>- Tetrasodium pyrophosphate |
| New Jersey Right-To-Know: | This product contains materials subject to disclosure under the New Jersey's Right-To-Know Law:<br>- Butoxyethanol, 2- (1736)<br>- Tetrasodium pyrophosphate (0275) |
| Pennsylvania Right-To-Know: | This product contains materials subject to disclosure under the |

## SECTION 15 REGULATORY INFORMATION

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|---|---|
| | Pennsylvania's Right-To-Know Law:<br>- Butoxyethanol, 2-<br>- Tetrasodium pyrophosphate |
| California Proposition 65: | This product contains materials which the State of California has found to cause cancer, birth defects or other reproductive harm:<br>- Trisodium nitrilotriacetate (< 0.0025%) |
| SARA TITLE Ill-Section 311/312 Categorization (40 CFR 370): | Immediate (acute) hazard |
| SARA TITLE 111-Seclion 313 (40 CFR 372): | This product contains materials which are listed in Section 313 at or above de minimis concentrations:<br>- Butoxyethanol, 2- (as glycol ethers) |
| CERCLA Hazardous Substance (40 CFR 302) | This product contains materials subject to reporting under CERCLA and Section 304 of EPCRA:<br>- Butoxyethanol, 2- (as glycol ethers) |
| Water Hazard Class (WGK): | This product is water-endangering (WGK=2). |
| Other Chemical Inventories: | Australia (AICS): All components listed.<br>China (IECSC): All components listed.<br>Japan (ENCS): All components listed.<br>Korea (KCI): All components listed.<br>Philippines (PICCS): All components listed. |

## SECTION 16 OTHER INFORMATION

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|---|---|
| NFPA Rating - HEALTH: | 2 |
| NFPA Rating - FIRE: | 1 |
| NFPA Rating - REACTIVITY: | 0 |
| NFPA Rating - SPECIAL: | NONE |
| Abbreviations: | GHS: Globally Harmonized System of Classification and Labeling of Chemicals<br>CAS#: Chemical Abstract Services Number<br>ACGIH: American Conference of Governmental Industrial Hygienists<br>OSHA: Occupational Safety and Health Administration<br>NFPA: National Fire Protection Association<br>DOT: US Department of Transportation<br>RCRA: US Resource Conservation and Recovery Act<br>TLV: Threshold Limit Value<br>TWA: Time-Weighted Average<br>PEL: Permissible Exposure Limit<br>STEL: Short Term Exposure Limit<br>WEEL: Workplace Environmental Exposure Levels<br>AIHA: American Industrial Hygiene Association<br>NTP: National Toxicology Program<br>IARC: International Agency for Research on Cancer<br>R: Risk<br>S: Safety |

## SECTION 16 OTHER INFORMATION

LD50: Lethal Dose 50%
LC50: Lethal Concentration 50%
EC50: Effective Concentration 50%
BCF Bioconcentration Factor
BOD: Biological Oxygen Demand
Koc: Soil Organic Carbon Partition Coefficient.
Tlm: Median Tolerance Limit

Key References:

United States National Library of Medicine's TOXNET
Patty's Toxicology, 5th Edition
European Commission's Institute for Health and Consumer Protection
American Conference of Governmental Industrial Hygienists
International Agency for Research on Cancer
United States National Toxicology Program
United States Occupational Safety and Health Administration
United States Department of Transportation
Supplier Material Safety Data Sheets

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**Version** 2.1
**Revision Date** 08/23/2016