



MATERIAL SAFETY DATA SHEET

MATERIAL SAFETY DATA SHEET - Complies with ANSI Z400.1 Draft Standard for the Preparation of Material Safety Data Sheets, Copyright 1991, Chemical Manufacturers Association. May be used to comply with U.S. Department of Labor OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standards must be consulted for specific requirements.

Date : 12/01/1998

PhosBrite® Multi-Purpose Cleaner

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: PhosBrite®

CHEMICAL NAME: Ortho-phosphoric acid

COMPANY IDENTIFICATION

Mr. Sandman Inc.
697 Ahua Street
Honolulu, HI
96819-2002

CHEMICAL FAMILY: Acids

EMERGENCY / TECHNICAL NUMBERS

(808) 833-2500

CHEMTREC:

(800) 424-9300

PRODUCT INFORMATION: MSDS Requests and Product Information: (808) 833-2500

SPECIAL NOTES:

2. COMPOSITION / INFORMATION INGREDIENTS

<u>COMPONENTS</u>	<u>CAS No.</u>	<u>OSHA Exposure Limits (PEL)</u>	<u>ACGIH Recommended Limits (TLV)</u>	<u>Percent by Weight</u>
Phosphoric Acid (75%) (H ₃ PO ₄)	7664-38-2	1 mg/m ³	1 mg/m ³	7.5
Water (H ₂ O)	7732-18-5	n/a	n/a	92.5
Ethyl Alcohol (C ₂ H ₆ OH)	64-17-5	1900 mg/m ³	1880 mg/m ³	<0.09

COMPOSITION COMMENTS:

Hazardous chemical data based on raw chemical (phosphoric acid) at 75%. Sourced from van Waters & Rogers.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Product is mildly corrosive. Will cause burns to eyes and skin. Mist produces irritation to eyes, nose, throat and lungs. Concentrated raw acid is dangerously corrosive.

POTENTIAL HEALTH EFFECTS

PRIMARY ROUTE OF ENTRY: Oral, nasal, skin

EYE: Corrosive. May cause redness, pain, blurred vision, eye burns, and permanent eye damage.

SKIN: Corrosive. May cause redness, pain, skin burns.

INGESTION: Corrosive. May cause sore throat, abdominal pain, nausea, and burns of the mouth, throat, and stomach. Severe exposures, particularly to raw acid, can lead to shock, circulatory collapse, and death.

INHALATION: Fumes may cause irritation to the nose, throat, and upper respiratory tract. Severe exposure can lead to a chemical pneumonitis. May aggravate existing respiratory conditions, including emphysema, asthma, and other conditions resulting in decreased respiratory function.

CHRONIC EFFECTS: Slightly toxic. May cause burns to exposed tissue.

4. FIRST AID MEASURES

Call a physician immediately.

SIGNS AND SYMPTOMS OF EXPOSURE

EYE: Redness, watering, blurred vision, burning sensation

SKIN: Redness, tender to the touch

INGESTION: Oral or abdominal pain

INHALATION: Coughing, shortness of breath

FIRST AID PROCEDURES

EYE: Flush thoroughly with cool running water, lifting lower and upper eyelids occasionally.

SKIN: Flush thoroughly with cool running water for at least 15 minutes. Remove contaminated clothing, flush with water, wash before reuse.

INGESTION: If swallowed, do not induce vomiting, seek medical attention. Give large quantities of water or milk. Never give anything orally to an unconscious person.

INHALATION: Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES: Nonflammable

FLASH POINT / METHOD USED: N/A

AUTOIGNITION: N/A

FLAMMABILITY LIMITS (% by volume in air): LEL: N/A UEL: N/A

PYROPHORIC, OXIDIZER, ORGANIC PEROXIDE: N/A

EXTINGUISHING MEDIA: Use any means suitable for extinguishing surrounding fire. Water spray, used in abundance to control heat and acid buildup, may be used to cool fire exposed containers.

NFPA RATINGS: Health 2; Flammability 0; Reactivity 1. ACID, COR

FIRE FIGHTING INSTRUCTIONS: Suitable for surrounding fire.

UNUSUAL FIRE AND EXPLOSIVE HAZARDS: Contact with most metals may cause formation of flammable and explosive hydrogen gas.

SPECIAL FIRE FIGHTING PROCEDURES: Wear full protective clothing and MIOSH-approved SCBA with full facepiece operated in the pressure demand or other positive pressure mode.

COMBUSTION PRODUCTS: May decompose at around 750°F to release oxygen. Will produce irritating phosphoric oxide fumes under fire conditions.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Respiratory protection: NIOSH/MSHA-approved acid gas full-face respiratory equipment with high efficiency dust/mist filters. Personal protection: NIOSH-approved garments and head gear. See Section 8. WARNING: Air purifying respirators offer no protection in oxygen deficient atmospheres.

CLEANUP MEASURES: Isolate hazard areas. Ventilate area of leak or spill. Keep unnecessary and unprotected personnel from entering area. Contain and recover for recycling as much liquid as possible, and store in appropriate containers. Neutralize area with alkaline materials (ie: soda ash, lime), absorb with an inert non-combustible material (ie: vermiculite, dry sand, earth) and place in a chemical waste container. Do not flush to sewer. Dispose of in accordance with all federal, state, and local regulations. CERCLA requires reporting spills and releases to soil, water, and air in excess of reportable quantities.

7. HANDLING AND STORAGE

NORMAL STORAGE: Keep in a tightly closed container, preferably plastic, rubber lined or 316 stainless steel containers designed for phosphoric acid. General dry storage, ambient air temperature and pressure. Keep from direct sunlight and incompatibles. Protect from physical damage. Corrosive to mild steel. Do not reuse container for other purposes.

HANDLING: Corrosive. Wear appropriate eye, respiratory and skin protection. When diluting, add small amounts slowly to cool water. Protect from freezing. Empty containers may contain product residues and should be considered hazardous.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposures below PELs or TLVs. Local exhaust ventilation is generally preferred to control contaminant emissions at the source, preventing dispersion into general work area.

RESPIRATORY PROTECTION: Use NIOSH/MSHA-approved acid gas full-face respiratory equipment with high efficiency dust/mist filters. Where exposure levels are not known, use of NIOSH approved SCBA with positive-pressure full-facepiece supplied air respirator is recommended. **WARNING:** Air purifying respirators offer no protection in oxygen deficient atmospheres.

EYE AND FACE PROTECTION: NIOSH-approved chemical safety goggles or full face shields where splashing is possible. Maintain eye-wash fountain in work area.

SKIN AND HAND PROTECTION: NIOSH-approved impervious protective garments, boots, gloves, apron or coveralls, and head gear. Maintain quick-drench facility in work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION: Rose colored liquid

ODOR: Mild acid smell

VAPOR PRESSURE (mm Hg): 17.5

BOILING POINT: 240°F

MELTING POINT: N/A

SPECIFIC GRAVITY (H₂O = 1): 1.2

FLASH POINT: N/A

VAPOR DENSITY (AIR = 1): N/A

EVAPORATION RATE (BUTYL ACETATE = 1): N/A

SOLUBILITY: Soluble in water

pH: 1.5

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable

CONDITIONS TO AVOID: Contact with strong alkalis and accidental metal contact should be avoided.

INCOMPATIBILITY WITH OTHER MATERIALS: Reaction with some metals and chlorides will release hydrogen gas. Reacts violently with sodium tetrahydroborate. Exothermic reactions with aldehydes, amines, amides, alcohols and glycols, azo-compounds, carbamates, esters, caustics, phenols and cresols, ketones, organophosphates, epoxides, explosives, combustible materials, unsaturated halides, and organic peroxides. Phosphoric acid forms flammable gases with sulfides, mercaptans, cyanides and aldehydes. It also forms toxic fumes with cyanides, sulfide, fluorides, organic peroxides, and halogenated organics. Mixtures with nitromethane are explosive.

HAZARDOUS DECOMPOSITION PRODUCTS: Phosphoric fumes and oxides under fire conditions. May release oxygen when heated to decomposition, around 750°F. Reactions which release hydrogen gas pose explosion hazard in confined spaces.

HAZARDOUS POLYMERIZATION: Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

CARCINOGENICITY: Oral, rat LD50: 1530 mg/kg

IARC MONOGRAPHS: No

TERATOGENIC: N/A

COMMENTS: Irritating to mucous membranes, respiratory tract, eyes and skin. Phosphoric acid is destructive in raw undiluted form. Investigated as a mutagen. "S5" on Poison Schedule.

NTP: No

OSHA REGULATED: No

MUTAGENIC: N/A



12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE: May leach into groundwater when released into soil. Inorganic phosphates in soil may be taken up by plants as nutritive compounds. May also form inert soil components. Acidity may be reduced or neutralized when released to water by natural water hardness minerals. Phosphate may persist indefinitely.

ENVIRONMENTAL TOXICITY: No information found.

13. DISPOSAL CONSIDERATIONS

Recover and recycle whenever possible. Handle as hazardous waste and dispose of in accordance with all federal, state and local regulations. Spent chemical may be neutralized to pH7 with the addition of lime or soda ash. Discharge to waste treatment facility in accordance with all federal, state and local regulations.

14. TRANSPORTATION INFORMATION

NAME OF CONTENTS: Multi-Purpose Industrial Cleaner

CONSTITUENTS: Phosphoric acid

UN/NA NUMBER: UN1805

EMERGENCY RESPONSE NUMBER: N/A

REPORTABLE QUANTITY: 350 lbs

HAZARD CLASS: 8

POISON INHALATION HAZARD: Acute

15. REGULATORY INFORMATION

All ingredients of this product are listed in compliance with Section 15 of the Toxic Substance Control Act (TSCA).

The SARA Title III / CERCLA reportable quantity (RQ) for this product is 350 lbs.

Mr. Sandman Inc. has prepared this material safety data sheet in order to provide product information which will assist our customers in complying with all state and federal waste and hazard minimization laws as well as all state and federal transportation laws.