

MATERIAL SAFETY DATA SHEET

FOR CHEMICAL EMERGENCY: Spill, Leak, Fire, Exposure or Accident CALL CHEMTREC DAY OR NIGHT 800-424-9300.

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: PHASE BUFFERED SOUR
24-hr. Emergency #: (800) 424-9300
US D.O.T. Hazardous Materials Registration No.: 062504-001-008MO
Commercial & Government Entity (CAGE) Code: 0YCK6
CHEMICAL NAMES & SYNONYMS: N/A
HMIS RATING: Health 3 / Fire 0 / Reactivity 0
FORMULA: Proprietary
CHEMICAL FAMILY: Fluorides
SUPPLIER'S NAME: Fabricean Supply of Kansas, LC
SUPPLIER'S ADDRESS: 14400 W. 97th Terrace
SUPPLIER'S CITY, STATE, ZIP: Lenexa, KS 66215
SUPPLIER'S TELEPHONE: (800) 832-0096

SECTION 2 - INGREDIENTS

Table with 3 columns: INGREDIENTS, PERCENT, ADOPTED VALUES. Contains information for Disodium hexafluoroarsiccate, sodium fluorosilicate, and sodium silicofluoride, including ACGIH TLVs, OSHA PELs, and NIOSH REIs.

(Note: The exact composition of this product, with respect to the percentages of its reported ingredients and the presence of it's non-regulated ingredients [not reported], is proprietary information and is being withheld. In the event of a medical emergency, total disclosure will be made to the proper authorities.)

SECTION 3 - HEALTH HAZARDS IDENTIFICATION

Threshold Limit Value: As indicated in Section 2 (above).

Primary Routes of Entry: Eye/skin contact. Inhalation. Ingestion.

EFFECTS OF OVEREXPOSURE: Eyes: Severe irritant. Skin: Skin irritant. Ulceration can follow if normal protective and sanitary measures are not observed. Skin absorption (low). Inhalation: Inhalation of dusts containing fluorosilicates can cause pulmonary irritation and death. Ingestion: Can cause gastrointestinal upset, nosebleed, and possible weakness. Fatality can occur. Inorganic fluorides are highly irritating and toxic. Large doses can cause nausea, vomiting, diarrhea, abdominal burning, and crano-like pains. Circulatory, respiratory, nervous complaints, and skin rashes may occur. Sclerosis or changes of bones and ligaments can be seen by x-ray. Enzyme system effects and pulmonary fibrosis

are reported. Common findings are eye, skin, and mucous membrane irritation, loss of weight, anorexia, anemia, wasting, cachexia, dental defects and tooth discoloration. May also cause abnormal hardening of bone.

SUPPLEMENTAL HEALTH INFORMATION: Pre-existing eye, skin and respiratory disorders may be aggravated by exposure. This product may contain trace amounts of ethylene oxide. The trace amounts of this hazardous component is not expected to result in either acute or long-term hazards when Nutra-Brite is handling according to instructions. You should be aware though that ethylene oxide is considered to be a possible carcinogen by IARC, suspected carcinogen by MAK, defined carcinogen by NIOSH; and anticipated to be carcinogenic by the NTP.

SECTION 4 - FIRST AID MEASURES

EYES: Object is to flush material out of eyes immediately, then seek medical attention. Immediately flush with plenty of water for at least 15 minutes while holding eyelids open to ensure flushing of the entire eye surface. Get medical attention.

SKIN: Immediately wash contaminated areas with plenty of water for at least 15 minutes. Remove contaminated clothing and footwear and wash clothing before reuse. Discard footwear, which cannot be decontaminated. Seek medial attention if symptoms develop or persist.

INHALATION: Remove to fresh air; if breathing is difficult, have trained personnel administer oxygen. If respiration stops, give mouth-to-mouth resuscitation. Get immediate medical attention. (Note: Coughing, sneezing or other symptoms of upper respiratory irritation may serve as a warning of exposure to high airborne concentrations.)

INGESTION: DO NOT INDUCE VOMITING! Rinse mouth with water; give large quantities of water or milk to drink. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Give more liquids. Do not give anything by mouth to an unconscious or drowsy person. Get immediate medical attention. (Because rapid absorption may occur through lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician.)

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SECTION 5 - FIRE & EXPLOSION HAZARDS AND FIRE FIGHTING MEASURES

Flash Point: None

Flammable Limits: N/A

Extinguishing Media: Small Fire: Dry chemical, CO2, Halon, water spray or standard foam. Large Fire: Water spray, fog or standard foam is recommended. Move container from fire area if you can do it without risk.

Special Fire Fighting Procedures: Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low area. Self-contained breathing apparatus (SCBA) and structural firefighter's protective clothing will provide limited protection.

Unusual Fire and Explosion Hazards: Highly toxic Na(2)O, HF, and F-fumes formed in a fire.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled: Keep unnecessary away; isolate area and deny entry. Stay upwind; keep out of low area. Avoid breathing dust. Wear respiratory equipment and protective clothing. Shovel or sweep up material and place in a clean container and seal. If water pollution occurs, notify the appropriate authorities.

Other Information: Surface subject to spills with this product can become slippery when wet. Exercise extreme caution when cleaning up spills.

Local regulations must be reviewed to ensure compliance with any procedures or chemical requirements not herein mentioned or which may vary from the procedures herein described.

SECTION 7- HANDLING AND STORAGE

Precautions to be taken in handling and storing: Store in a cool, dry well-ventilated area. Do not store near food or feed, especially since this material has the same appearance as common edibles such as salt, sugar, flour, etc. No not apply to foliage, fruit, vegetables or fodder.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: For dust or mist concentrations above PEL/TLV and up to 12.5 mg/m3 use any NIOSH approved dust and mist respirator except single use. NIOSH: VV8410000.

Ventilation Required: Local mechanical exhaust ventilation recommended to minimize employee exposure.

Protective Clothing: Eyes: Wear chemical goggles. Skin: Wear standard work clothes, impervious gloves and boots.

Additional Protective Measures: Wash with soap and water before eating, drinking, smoking or using toilet facilities. Safety shower, eye bath, and washing facilities should be available and easily accessible.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Fine, off-white, free-flowing powder

State: Solid

Odor: No distinct odor.

Solubility in water: Complete

pH: (1% solution) 3.5 typical

SECTION 10 - STABILITY AND REACTIVITY DATA

Stability: Stable

Incompatibility: Silicon tetrafluoride, acids, alkalis. Contact with strong acid will cause formation of hydrogen fluoride gas.

Hazardous Decomposition: Silicon fluorides, hydrogen fluoride, sodium oxide and fluorine fumes are formed in fire.

Hazardous Polymerization: Will not occur.

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SECTION 11 - TOXICOLOGICAL INFORMATION

Ecotoxicological Information: Fluoride: Acte Dermal: LD(50) >2 g/kg (rabbit). Acute Inhalation: (C(50) >200 mg/L for 1 hour (rat). Acute Oral: LD(50): 125 mg/kg (rats).

Chemical Fate Information: N/D

SECTION 12 - ECOLOGICAL INFORMATION

UNK

SECTION 13 - DISPOSAL CONSIDERATIONS

Dispose of contaminated product, empty containers and material used in cleaning up spills or leaks at an approved facility in accordance with all applicable federal, state and local regulations.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name: Fluorosilicates, n.o.s.

Hazard Class: 6.1

UN#: UN2856

Packing Group: III

Sticker Required: Keep away from food

Emergency Response Guide Sheet: 151

SECTION 13 - REGULATORY INFORMATION

(Notice: The information herein is presented in good faith and believed to be accurate as of the effective date shown below. However, no warranty, expressed or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.)

(A simple explanation of each act [legislation] is included in this section. Ingredients listed in these sections means they are governed by that particular act.)

RCRA - RESOURCE CONSERVATION AND RECOVERY ACT (HAZARDOUS WASTE): The act that mandated the development of hazardous waste regulations. These regulations can be found in 40 CFR 260-281.

Ethylene oxide.

REPORTABLE QUANTITIES - CERCLA (ACCIDENTAL RELEASE): The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) identifies a list of substances that have an adverse effect if released to the environment. The Act designates the reportable quantity (RQ) for each of these substances, and the notification requirements for releases or spills. When a specified amount of a chemical is released or spilled, the National Response Center must be notified. This specified amount is the "reportable quantity." The reportable quantity for each chemical is based on the severity of environmental hazard it present.

Ethylene oxide.

THRESHOLD PLANNING QUANTITIES (SARA - COMMUNITY RIGHT TO KNOW) EXTREMELY HAZARDOUS SUBSTANCE LIST: The Extremely Hazardous Substance (EHS) list and planning quantities trigger certain reporting requirement to emergency planning agencies. If you facility has a listed hazardous substance in amounts equal to or greater than the quantities shown on the index, the regulations of 40 CFR 355 and 370 apply to you.

Ethylene oxide.

SARA TITLE III, SECTION 313: EPA has developed a list of over 320 regulated chemicals and 22 chemical categories. An entry in this section, indicates that a given chemical appears on this list. The entry will consist of a date, which identifies the effective date for reporting; and a "de minimis" amount. This amount, 1% or 0.1%, indicates the minimum amount of a chemical that must be present in a mixture to trigger reporting.

Ethylene oxide.

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RISK MANAGEMENT PROGRAM - EPA: On January 31, 1994, a new EPA rule was finalized. It was required under section 112(r) of the Clean Air Act. It is aimed at preventing accidental chemical releases. This first rule presented a list, composed of three categories: 77 toxic substances, 63 flammable substances, and explosive substances with a mass explosion hazard as listed by DOT. The complete regulation can be found in 40 CFR Part 68 - Chemical Accident Prevention Provisions.

Ethylene oxide.

WHMIS - CANADA: The Workplace Hazardous Materials Information System (WHMIS) is Canada's version of Hazard Communication. Its provisions closely parallel the US. Regulations.

Ethylene oxide. Fluoride compounds at 1% levels.

DOT: The Department of Transport (DOT) regulates those substances that present a potential hazard during transportation. There may be labeling, special packaging, and/or placarding required.

Fluorosilicates, ethylene oxide.

NFPA - NATIONAL FIRE PROTECTION ASSOCIATION: The National Fire Protection Association (NFPA) is a nonprofit, educational organization. The goal of NFPA is to promote the science of fire protection and prevention. With this aim, NFPA has developed information on the hazardous properties of many chemicals, which enables the user to come up with safe procedures during the chemicals' use, storage, and transportation. There are three categories of hazards: Health (H), flammability (F), and reactivity (R). Within each category, there are numerical ratings from 0 - 4, with 0 indicating no hazard, 4 indicating severe hazard.

Ethylene oxide - Health 2 / Fire 4 / Reactivity 3.

HAZARD COMMUNICATION: OSHA's Hazard Communication Standard initially went into effect November 1985/May 1986. It is OSHA's most comprehensive worker protection regulation. It provides for information and training for workers encountering chemical exposures in the workplace. The standard requires the use of labels and Material Safety Data Sheets for all regulated chemicals.

National Toxicology Program (NTP): A list of carcinogens. Ethylene oxide.

IARC - International Agency For Research On Cancer: Another carcinogen list. Ethylene oxide.

Subpart Z - OSHA: (Found at 1910.1000-.1101) If a chemical is on this list, it means there are specific training requirements on the handling, etc. Ethylene oxide.

Threshold Limit Values: ACGIH: Threshold limit values (TLVs) which refer to airborne concentrations of substances and represent conditions under which nearly all workers must be repeatedly exposed day after day without adverse effect. Ethylene oxide, fluorides.

Process Safety Management - OSHA: OSHA established a regulation (1910.119) to monitor and control safety at certain types of industrial facilities. Compliance is triggered by specified quantities of specific chemicals.

Ethylene oxide - 5,000 lbs.

Proposition 65 - California: Proposition 65 refers to an initiative passed by the California voters in the November 1986 elections. It is the Safe Drinking Water and Toxic Enforcement Act of 1986. One of the components is the listing of chemicals known to cause cancer or reproductive toxicity. Twelve months after a chemical is listed, a person in the course of doing business must warn another person who may consume, come into contact with, or otherwise be exposed to that chemical.

Ethylene oxide - 2/27/87 - Reproductive hazard. 7/1/87 - carcinogen.

The New Clean Air Act - Hazardous Air Pollutants: This rule regulates the emissions of 112 of the organic chemicals identified in the Cats list of 189 hazardous air pollutants.

Ethylene oxide.

SECTION 16 - OTHER INFORMATION

AS A GENERAL RULE, PREVENT AND PROTECT THIS PRODUCT FROM UNAUTHORIZED USE

FOR INDUSTRIAL USE ONLY !!!!!

END OF REPORT

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**DATE ISSUED: 09/05/96
DATE REVISED: 07/01/04**

**< = LESS THAN
> = MORE THAN
UNK = UNKNOWN**

**N/A = NOT APPLICABLE
N/D = NOT DETERMINED
N/E = NOT ESTABLISHED**

In accord with the philosophy established by the Occupational Safety and Health Administration's Hazard Communication Final Rule, 1985, this Material Safety Data Sheet has been designed to emphasize the hazardous portions (ingredient[s]) utilized in the total formulation. As a result, the information herein stresses the most hazardous component(s) only. By this approach, we feel better knowledge and awareness should substantially contribute to reduce exposure and injury to workers involved with the use of this product. The information supplied in this document is presented for exactly this purpose. As required by law, this data should be thoroughly read and made available to anyone who may be responsible for handling this material. All data provided relates to the concentrated product as shipped. Actual usage rates and further dilution will, in most cases, greatly reduce, if not eliminate, the potential for worker injury. Any and all chemical products should be handled with extreme care and only by authorized and informed personnel. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this MSDS should be provided to your employees or customers. It is your responsibility to use this information to develop appropriate work practice guidelines and employee instructional programs for your operation.

The information and recommendations provided in this Material Safety Data Sheet have been obtained from data we believe to be reliable. We provide no warranties, expressed or implied, or accept no responsibility for loss associated with the use or handling of this product. This information is offered for your review and consideration. Efforts should be extended to determine the applicability of this product for your specific intended use. We know of no medical condition, other than those noted in this Material Safety Data Sheet, which are generally recognized as being aggravated by exposure to this product.

REASON FOR REVISION: Section 1 - Haz. Mat. Reg. number