Date prepared: March 16, 2005

Revision 7

#### **MATERIAL SAFETY DATA SHEET**

HF scientific, inc. 3170 Metro Parkway Fort Myers, FL 33916-7597 (239) 337-2116 Mon-Fri 8 am - 4:30 pm

24 Hour Emergency Telephone Number CHEMTREC 1-800-424-9300

### SECTION 1 PRODUCT IDENTIFICATION

PRODUCT NAME: BUFFER SOLUTION pH4

CATALOG NUMBER:

HF scientific, inc.: 1 gallon - 10124, 10124A

Ecometrics: 1 gallon - 10125

U.S. Filter/Wallace & Tiernan: 1 gallon - 10194/U24494

4 - 1 gallon - 10195/U13765 4 ounce - 10206/U28962

FORMULA:

Glacial acetic acid

<50%

(CAS # 64-19-7)

Water

<40%

(CAS # 7732-18-5)

Sodium Acetate

<15%

(CAS # 127-09-3)

## **SECTION 2 HAZARDOUS INGREDIENTS**

OTHER LIMITS ardous Component(s) OSHA PEL

acial acetic acid

10 opm

ACGIH TLV RECOMMENDED

10 ppm

(CAS # 64-19-7)

# **SECTION 3 Physical/Chemical Characteristics**

Boiling point (F): >212 ° F (100 ° C)

Specific gravity H<sub>2</sub>0=1: 1.11

Vapor pressure (mm Hg): approx, 11,65 mm Hg

Vapor density (air=1): approx. 2.01

Evaporation rate (butyl acetate = 1): undetermined

Solubility in water: completely

Appearance and odor: clear liquid, at room temperature, with an odor

of vinegar

### SECTION 4 FIRE AND EXPLOSION HAZARD DATA

Flash point (method used): unknown for mixture.

acetic acid: 102° F(closed cup)

Flammable limits: acetic acid: lel 5.40%

uel 16.0%

Extinguishing media: carbon dioxide, dry chemical, alcohol foam, or water fog.

Fire fighting procedures: wear self contained breathing apparatus and protective clothing

Unusual fire and explosive hazards: hydrogen gas can be generated by the action of acid on most metals.

# **SECTION 5 REACTIVITY DATA**

^ability: stable under ordinary conditions of use and storage. Heat and light can contribute to instability.

conditions to avoid: oxidizing materials, bases & common metals other than aluminum or stainless steel.

Incompatibility (materials to avoid): see above.

Hazardous decomposition or byproducts: produces carbon

monoxide if burned with limited air. Hydrogen may be generated by the

action on metals.

Hazardous polymerization: will not occur.

# **SECTION 6 HEALTH HAZARD DATA**

Route(s) of entry: Inhalation? Yes Skin? No\* Ingestion? Yes

\*contact may cause skin damage

Health hazards (acute and chronic): repeated or prolonged exposures may cause chronic inflammation of the nose, throat, and bronchial tubes.

Carcinogenicity: NTP? IARC monographs? OSHA regulated?

not listed

Signs and symptoms of exposure: irritation of skin, eyes, and

respiratory tract.

Medical conditions generally aggravated by exposure: preexisting skin disorders, eye problems or respiratory problems.

Emergency first aid procedures:

Eyes or skin: flush with water for at least 15 minutes. See a physician.

Ingestion: give large amounts of water which may contain milk of magnesia and may be followed with raw egg white beaten with water. See a physician.

Inhalation: remove to fresh air.

### **SECTION 7 SAFE HANDLING AND USE**

Steps to be taken in case material is released or spilled: shut off sources of ignition. Ventilate.

Waste disposal method: dispose of in accordance with all applicable federal, state and local environmental regulations.

Precautions to be taken in handling & storage: keep away from heat and flame. Keep container closed when not in use.

Other precautions: none found

#### SECTION 8 CONTROL MEASURES

Respiratory protection: local exhaust ventilation to keep below exposure

Ventilation systems: local exhaust,

Skin protection: wear appropriate impervious gloves and protective

clothing

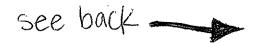
Eye protection: splash goggles

Other protective clothing or equipment: eyewash stations in use area.

Work/hygienic practices: wash well after handling. Avoid breathing

vapors

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U-13765 BUFFER/INV/SOLUTION/PH 4/ ALKI/4-1GAL KIT RN 3C

U-23661 BOTTLE/INV/POWDER/POTASSIUM/ IODIDE/MICRO 2000/ALKI RN D2-7