



Material Safety Data Sheet

Buffer for fluoride

Section 1 - Chemical Product and Company Identification

MSDS Name:

Buffer for fluoride

Catalog Numbers:

LC12580

Synonyms:**Company Identification:**

LabChem, Inc.
200 William Pitt Way
Pittsburgh, PA 15238

Company Phone Number:

(412) 826-5230

Emergency Phone Number:

(800) 424-9300

CHEMTREC Phone Number:

(800) 424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
7732-18-5	Water	balance
7647-14-5	Sodium chloride	5.8
64-19-7	Acetic acid	5.7
1310-73-2	Sodium hydroxide	2
6132-04-3	sodium citrate, dihydrate	0.03

Section 3 - Hazards Identification

Potential Health Effects**Eye:**

Eye irritation and possible corneal damage may occur.

Skin:

Exposure may cause dermatitis and sensitization.

Ingestion:

Ingestion can result in mouth, throat, and abdominal burning pain, vomiting, diarrhea, nausea, bloody stools, hematemesis, hematuria, albuminuria, asphyxia.

Inhalation:

Inhalation of vapors may cause respiratory tract irritation and coughing.



Material Safety Data Sheet

Buffer for fluoride

Chronic:

May cause dermatitis and conjunctivitis. Prolonged exposure to acetic acid may result in tooth discoloration, enamel erosion, jaw necrosis, nasal ulceration, laryngitis, pneumonia, bronchitis, coughing, gastrointestinal disturbances.

Section 4 - First Aid Measures

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once. Cover burns with loose sterile non-medicated bandages.

Skin:

Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes. Cover burns with a dry sterile bandage (secure, not tight).

Ingestion:

Get medical aid at once. Give 1 ounce of milk of magnesia. Give conscious victim large quantities of water to dilute acid. If victim is conscious, give 2-4 glasses of water and induce vomiting.

Inhalation:

Give artificial respiration if necessary. Get medical aid. Keep victim warm, at rest. Move victim to fresh air.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:

Negligible fire and explosion hazard when exposed to heat or flame. Move container if possible, avoid breathing vapors or dust.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature:

No information found.

Flash Point:

No information found.

NFPA Rating:

CAS# 7732-18-5: Not published.

CAS# 7647-14-5: Not published.

CAS # 64-19-7 health-3; flammability-2; reactivity-0

CAS# 1310-73-2: Not published.

CAS# 6132-04-3: Not published.

Explosion Limits:

Lower: Upper:

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.



Material Safety Data Sheet

Buffer for fluoride

Spills/Leaks:

Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Avoid breathing dust, vapor, mist, or gas.

Storage:

Store capped at room temperature. Protect from heat and incompatibles.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Provide local exhaust or general dilution ventilation.

Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Water	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Sodium chloride	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Acetic acid	10 ppm TWA; 15 ppm STEL	10 ppm TWA; 25 mg/m ³ TWA	10 ppm TWA; 25 mg/m ³ TWA;
Sodium hydroxide	None of the components are on this list.	None of the components are on this list.	2 mg/m ³ TWA;
sodium citrate, dihydrate	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.

OSHA Vacated PELs

Acetic acid: 10 ppm TWA; 25 mg/m³ TWA

Acetic acid: 10 ppm TWA; 25 mg/m³ TWA

Acetic acid: 10 ppm TWA; 25 mg/m³ TWA

Personal Protective Equipment

Eyes:

Do not wear contact lenses when working with chemicals. An eye wash fountain should be available in the immediate work area. Wear splash-proof safety goggles.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Not required for normal use. Firefighting-- any self-contained breathing apparatus with full facepiece operated in pressure-demand mode.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid



Material Safety Data Sheet

Buffer for fluoride

Color: colorless

Odor: slight pungent - vinegar-like

pH: No information found.

Vapor Pressure: No information found.

Vapor Density: No information found.

Evaporation Rate: No information found.

Viscosity: No information found.

Boiling Point: No information found.

Freezing/Melting Point: No information found.

Decomposition Temperature: No information found.

Solubility in water: Soluble.

Specific Gravity/Density: No information found.

Molecular Formula: No information found.

Molecular Weight: No information found.

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures. May emit small amounts of acetic vapors.

Conditions to Avoid:

Heat.

Incompatibilities with Other Materials

None reported.

Hazardous Decomposition Products

Acetic acid vapors.

Hazardous Polymerization

Has not been reported

Section 11 - Toxicological Information

RTECS:

CAS# 7732-18-5: ZC0110000.

CAS# 7647-14-5: VZ4725000.

CAS# 64-19-7: AF1225000.

CAS# 1310-73-2: WB4900000.

CAS# 6132-04-3 unlisted.



Material Safety Data Sheet

Buffer for fluoride

LD50/LC50:

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg.

CAS# 7647-14-5:

Oral, mouse: LD50 = 4 gm/kg

Oral, rat: LD50 = 3 gm/kg.

CAS# 64-19-7:

Inhalation, mouse: LC50 = 5620 ppm/1H

Oral, rat: LD50 = 3310 mg/kg

Skin, rabbit: LD50 = 1060 mg/kg.

CAS# 1310-73-2:

No information found. CAS# 6132-04-3:

No information found.

Carcinogenicity:

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 7647-14-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 64-19-7: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 1310-73-2: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 6132-04-3: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

Epidemiology:

Solutions containing acetic acid are mild to severe skin, eye, mucous membrane, respiratory irritant and skin sensitizer.

Teratogenicity:

Reproductive:

Mutagenicity

Neurotoxicity

Section 12 - Ecological Information

No information found.

Section 13 - Disposal Considerations

Dispose of in accordance with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Not regulated.

Hazard Class:

UN Number:

Packing Group:

Section 15 - Regulatory Information

US Federal



Material Safety Data Sheet

Buffer for fluoride

TSCA

CAS# 7732-18-5 is listed on the TSCA Inventory.

CAS# 7647-14-5 is listed on the TSCA Inventory.

CAS# 64-19-7 is listed on the TSCA Inventory.

CAS# 1310-73-2 is listed on the TSCA Inventory.

CAS# 6132-04-3 is not on the TSCA Inventory, however, its anhydrous form is on the inventory and so this hydrate is exempt from TSCA Inventory requirements (40CFR270.3(u)(2)).

SARA Reportable Quantities (RQ)

CAS# 64-19-7: final RQ = 5000 pounds (2270 kg)

CAS# 1310-73-2: final RQ = 1000 pounds (454 kg)

CERCLA/SARA Section 313

None of the components are on this list.

OSHA - Highly Hazardous

None of the components are on this list.

US State

State Right to Know

Acetic acid can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

Sodium hydroxide can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

California Regulations

European/International Regulations

Canadian DSL/NDSL

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 7647-14-5 is listed on Canada's DSL List.

CAS# 64-19-7 is listed on Canada's DSL List.

CAS# 1310-73-2 is listed on Canada's DSL List.

Canada Ingredient Disclosure List

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 7647-14-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 64-19-7 is listed on Canada's Ingredient Disclosure List.

CAS# 1310-73-2 is listed on Canada's Ingredient Disclosure List.

CAS# 6132-04-3 is not listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: August 16, 1998

Revision Date: March 9, 2004

Information in this MSDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and LabChem Inc. assumes no liability resulting from the use of this MSDS. The user must determine suitability of this information for his application.