SAFETY DATA SHEET

Acetate Buffer, 0.2M, pH5.0

Version 2 · issued 14 September 2026

1. IDENTIFICATION

Product Identifiers

Product Name	Acetate Buffer, 0.2M, pH5.0
Other Names	Not available.
Product Number(s)	11482-50, EMS11482-50
CAS Number	Acetic acid: 64-19-7 Sodium acetate: 127-09-3

Recommended use of the chemical and restriction on use

Laboratory chemicals, maintain a stable acidic pH around 5.0 during chemical, pharmaceutical, and laboratory procedures.

Company Details

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS02 Flame
Flammable liquids 3 H226 Flammable liquid and vapour.
GHS06 Skull and crossbones
Acute toxicity - oral 1 H300 Fatal if swallowed.
Acute toxicity - dermal 1 H310 Fatal in contact with skin.
Acute toxicity - inhalation 1 H330 Fatal if inhaled.
GHS05 Corrosion
Skin corrosion 1B H314 Causes severe skin burns and eye damage.
Eye damage 1 H318 Causes serious eye damage.

Label Elements

Flammable • Corrosive • Acute toxicity

Signal Words	Danger
Hazard Statement(s)	Hazard-determining components of labelling: Acetic Acid Glacial SODIUM ACETATE TRIHYDRATE Flammable liquid and vapour. Fatal if swallowed, in contact with skin or if inhaled. Causes severe skin burns and eye damage.

Precautionary Statement(s)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Ground / bond container and receiving equipment.
Use explosion-proof [electrical/ventilating/lighting] equipment.
Use non-sparking tools.
Take action to prevent static discharge.
Do not breathe dusts or mists.
Do not get in eyes, on skin, or on clothing.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
[In case of inadequate ventilation] wear respiratory protection.

Primary route(s) of entry

Routes of exposure: skin contact, eye contact, inhalation, ingestion.

Human Health

Inhalation remove person to fresh air and keep comfortable for breathing.

Ingestion Immediately call a POISON CENTER/doctor. Rinse mouth. Do NOT induce vomiting.

Eyes Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin (or hair) Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

Environment

In case of fire: Use for extinction: CO2, powder or water spray.
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Name	CAS No.	Content (w/w)	Classification
Acetic Acid Glacial	64-19-7	30-60%	Mixtures
SODIUM ACETATE TRIHYDRATE	6131-90-4	30-60%	Mixtures

4. FIRST AID MEASURES

Ingestion

Do not induce vomiting; call for medical help immediately.
Drink plenty of water and provide fresh air. Call for a doctor immediately.

Inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.

Skin Contact Immediately wash with water and soap and rinse thoroughly.

Eye Contact Rinse opened eye for several minutes under running water. Then consult a doctor.

Other Information

Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
In case of irregular breathing or respiratory arrest provide artificial respiration.

5. FIREFIGHTING MEASURES

Suitable extinguishing equipment

Fire CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

HAZCHEM For safety reasons unsuitable extinguishing agents: Water with full jet.

Special protective equipment and precautions for fire fighters

Mouth respiratory protective device.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.

Environmental precautions
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

Methods and materials for containment and clean up
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
· Protective Action Criteria for Chemicals
· PAC-1:
64-19-7 Acetic Acid Glacial 5 ppm
6131-90-4 SODIUM ACETATE TRIHYDRATE 11 mg/m³
· PAC-2:
64-19-7 Acetic Acid Glacial 35 ppm
6131-90-4 SODIUM ACETATE TRIHYDRATE 120 mg/m³
· PAC-3:
64-19-7 Acetic Acid Glacial 250 ppm
6131-90-4 SODIUM ACETATE TRIHYDRATE 690 mg/m³

7. HANDLING AND STORAGE

Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
Information about protection against explosions and fires:
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
Keep respiratory protective device available.

Conditions for safe storage
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions:
Keep receptacle tightly sealed.
Protect from heat and direct sunlight.
Specific end use(s) No further relevant information available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards

Material	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³
Acetic Acid Glacial	10ppm	25mg/m³	15ppm	37mg/m³

Engineering controls
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

Personal protective equipment
Eye and face protection
Tightly sealed goggles.

Skin protection	Protective gloves The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. Material of gloves The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. Penetration time of glove material The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Body protection	Wear protective clothing.
Respiratory protection	In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

9. PHYSICAL AND CHEMICAL PROPERTIES

General information

Appearance	Clear liquid
Odour	Pungent
pH	5
Vapour Pressure	11.4hPa
Density	Not determined.
Boiling Point	118°C
Melting Point	Undetermined
Solubility	Fully miscible.
Specific Gravity of Density	Not available.
Flash Point	43 °C (109.4 °F)
Flammable (Explosive) Limits	Lower: 4.0 Vol% Upper: 19.0 Vol%
Ignition Temperature	Product is not selfigniting.
Formula	Not available.

10. STABILITY AND REACTIVITY

Reactivity	No further relevant information available.
Chemical stability	No decomposition if used according to specifications.
Possibility of hazardous reactions	No dangerous reactions known.
Conditions to avoid	No further relevant information available.
Incompatible materials	No further relevant information available.

11. TOXICOLOGICAL INFORMATION

Acute effects	64-19-7 Acetic Acid Glacial Oral LD50 3310 mg/kg (rat) Dermal LD50 1060 mg/kg (rabbit)
Eye contact	Strong caustic effect. Strong irritant with the danger of severe eye injury.
Skin contact	Strong caustic effect on skin and mucous membranes.
Ingestion	Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach.
Inhalation	No sensitising effects known.

Toxicity and irritation

The product shows the following dangers according to internally approved calculation methods for preparations:
Corrosive
Irritant
Very toxic
Danger through skin absorption.
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
Interactive effects No interactive effects between components are known.
Carcinogenic categories
IARC (International Agency for Research on Cancer): None of the ingredients is listed.
NTP (National Toxicology Program): None of the ingredients is listed.
OSHA-Ca (Occupational Safety Health Administration): None of the ingredients is listed.

12. ECOLOGICAL INFORMATION

Ecotoxicity — No further relevant information available.

Persistence and degradability — No further relevant information available.

Bioaccumulative potential — No further relevant information available.

Other adverse effects — Water hazard class 1: slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.

13. DISPOSAL CONSIDERATIONS

General information
Recommendation:
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
· Uncleaned packagings:
· Recommendation: Disposal must be made according to official regulations.
· Recommended cleansing agent: Water, if necessary with cleansing agents.

14. TRANSPORT INFORMATION

ADG label required
Class 6.1 Toxic • Class 8 Corrosive

HAZCHEM — For safety reasons unsuitable extinguishing agents: Water with full jet.

UN Number — UN2927

Proper shipping name
· DOT Toxic liquids, corrosive, organic, n.o.s. (SODIUM ACETATE TRIHYDRATE, Acetic acid, glacial)
· ADR 2927 TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (SODIUM ACETATE TRIHYDRATE, ACETIC ACID, GLACIAL)
· IMDG, IATA TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (SODIUM ACETATE TRIHYDRATE, ACETIC ACID, GLACIAL)

Transport hazard class — Class 6.1 Toxic substances · Label 6.1, 8

Packing group — I

Environmental hazard — Not applicable.

Special precautions for users

Transport/Additional information:
· DOT
· Quantity limitations On passenger aircraft/rail: 0.5 L On cargo aircraft only: 2.5 L
· ADR
· Excepted quantities (EQ) Code: E5
Maximum net quantity per inner packaging: 1 ml
Maximum net quantity per outer packaging: 300 ml
· IMDG
· Limited quantities (LQ) 0
· Excepted quantities (EQ) Code: E5
Maximum net quantity per inner packaging: 1 ml
Maximum net quantity per outer packaging: 300 ml
· Special precautions for user Warning: Toxic substances
· Poison inhalation hazard: Possible
· Hazard identification number (Kemler code): 668
· EMS Number: F-A,S-B
· Segregation groups (SGG1) Acids
· Stowage Category B
· Stowage Code SW2 Clear of living quarters.

Additional information

Limited quantities (LQ) 1L
Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30mL
Maximum net quantity per outer packaging: 500mL
Transport category: 2
Tunnel restriction code: E

15. REGULATORY INFORMATION

Poisons Schedule Number

64-19-7 Acetic Acid Glacial S2, S5, S6

Other Information

Section 355 (extremely hazardous substances): None of the ingredients is listed.
Section 313 (Specific toxic chemical listings): None of the ingredients is listed.
TSCA (Toxic Substances Control Act):
64-19-7 Acetic Acid Glacial ACTIVE
7732-18-5 Deionized Water, Reagent Grade A.C.S. ACTIVE
· Hazardous Air Pollutants: None of the ingredients is listed.
Proposition 65
· Chemicals known to cause cancer: None of the ingredients is listed.
· Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed.
· Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed.
· Chemicals known to cause developmental toxicity: None of the ingredients is listed.
Carcinogenic categories
· EPA (Environmental Protection Agency): None of the ingredients is listed.
· TLV (Threshold Limit Value): None of the ingredients is listed.
· NIOSH-Ca (National Institute for Occupational Safety and Health): None of the ingredients is listed.

16. OTHER INFORMATION

SDS preparation date

14 September 2026

Comments	Abbreviations and acronyms: ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Flammable liquids 3: Flammable liquids – Category 3 Acute toxicity - oral 1: Acute toxicity – Category 1 Skin corrosion 1B: Skin corrosion/irritation – Category 1B Eye damage 1: Serious eye damage/eye irritation – Category 1
References	Electrom Microscopy Science SDS "ACETATE BUFFER, 0.2M, pH 5.0." 01/03/2025 https://www.emsdiasum.com/docs/technical/msds/11482-50.pdf

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