Safety Data Sheet

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision date: 27.02.2016  Version: 6.00  Print date: 27.02.2016

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Trade name/designation: pH-Buffer solution pH 5
Product No.: C0772
Synonyms: no data available
CAS No.: not applicable
Other means of identification:

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use: For Further Manufacturing Use Only
Uses advised against: Not for Human or Animal Drug Use

Details of the supplier of the safety data sheet

United States of America

Supplier

VWR International LLC
Street 100 Matsonford Road Radnor Corporate Center, Building One, Suite 200 P.O. Box 6660
Postal code/city Radnor, PA 19087
Telephone +1-800-932-5000 toll-free within US/CA
+1-610-386-1700
Telefax +1-610-728-2103
SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

2.1.1 GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

This mixture is classified as not hazardous according to regulation 29 CFR 1910.1200 (OSHA HCS)

2.2 Label elements

2.2.1 Labelling in accordance with 29 CFR 1910.1200 (OSHA HCS)

According to regulation 29 CFR 1910.1200 (OSHA HCS) the product does not have to be labelled.

SECTION 3: Composition / information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

This mixture does not contain any substances presenting a health or environmental hazard within the meaning of regulation 29 CFR 1910.1200 (OSHA HCS)

SECTION 4: First aid measures

4.1 General information

When in doubt or if symptoms are observed, get medical advice. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.
After inhalation
Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. In case of respiratory tract irritation, consult a physician.

In case of skin contact
After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

After eye contact
In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

In case of ingestion
If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting. Give nothing to eat or drink.

4.2 Most important symptoms/effects, acute and delayed
no data available

4.3 Indication of any immediate medical attention and special treatment needed
no data available

4.4 Self-protection of the first aider
First aider: Pay attention to self-protection!

4.5 Information to physician
no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
The product itself does not burn.
Co-ordinate fire-fighting measures to the fire surroundings.

Extinguishing media which must not be used for safety reasons
no restriction

5.2 Specific hazards arising from the chemical
In case of fire may be liberated:
Pyrolysis products, toxic

5.3 Advice for firefighters
DO NOT fight fire when fire reaches explosives. In case of fire: Wear self-contained breathing apparatus.

5.4 Additional information
Do not allow run-off from fire-fighting to enter drains or water courses. Do not inhale explosion and combustion gases. Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen. Use water spray/stream to protect personnel and to cool endangered containers.
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
In case of major fire and large quantities: Remove persons to safety.

6.2 Environmental precautions
Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up
Spilled product must never be returned to the original container for recycling. Collect in closed and suitable containers for disposal.

6.4 Additional information
Clear spills immediately.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
All work processes must always be designed so that the following is as low as possible: Inhalation skin contact Eye contact Use extractor hood (laboratory). If handled uncovered, arrangements with local exhaust ventilation have to be used. If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

7.2 Conditions for safe storage, including any incompatibilities
storage temperature: no data available
Storage class: no data available
Keep in a cool, well-ventilated place. Keep/Store only in original container.

7.3 Specific end use(s)
no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Does not contain substances above concentration limits fixing an occupational exposure limit.

8.2 Engineering controls

Appropriate engineering controls
Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Personal protection equipment (PPE)
Wear suitable protective clothing. When handling with chemical substances, protective clothing must be worn.

Eye/face protection
Eye glasses with side protection

Skin protection
no data available
By short-term hand contact
Suitable material: no data available
Thickness of the glove material: no data available
Breakthrough time (maximum wearing time): no data available

By long-term hand contact
Suitable material: no data available
Thickness of the glove material: no data available
Breakthrough time (maximum wearing time): no data available

Respiratory protection
Usually no personal respirative protection necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
(a) Appearance
   Physical state: liquid
   Color: no data available
(b) Odour: no data available
(c) Odour threshold: no data available

Safety relevant basic data
(d) pH: 5.00 (20 °C)
(e) Melting point/freezing point: no data available
(f) Initial boiling point and boiling range: no data available
(g) Flash point: no data available
(h) Evaporation rate: no data available
(i) Flammability (solid, gas): not applicable
(j) Flammability or explosive limits
   Lower explosion limit: no data available
   Upper explosion limit: no data available
(k) Vapour pressure: no data available
(l) Vapour density: no data available
(m) Relative density: no data available
(n) Solubility(ies)
   Water solubility (g/L): no data available
   Soluble (g/L) in Ethanol: no data available
(o) Partition coefficient: n-octanol/water: no data available
(p) Auto-ignition temperature: no data available
(q) Decomposition temperature: no data available
(r) Viscosity
   Kinematic viscosity: no data available
   Dynamic viscosity: no data available
(s) Explosive properties: not applicable
(t) Oxidising properties: not applicable

9.2 Other information
Bulk density: not applicable
Refraction index: no data available
Dissociation constant: no data available
Surface tension: no data available
Henry constant: no data available

SECTION 10: Stability and reactivity

10.1 Reactivity
no data available

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions
no data available

10.4 Conditions to avoid
no data available

10.5 Incompatible materials
no data available

10.6 Hazardous decomposition products
no data available

10.7 Additional information
no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute effects
Acute oral toxicity: no data available

Acute dermal toxicity: no data available

Acute inhalation toxicity: no data available
Irritant and corrosive effects
Primary irritation to the skin: not applicable

Irritation to eyes: not applicable

Irritation to respiratory tract: not applicable

Respiratory or skin sensitization
In case of skin contact: not sensitising
After inhalation: not sensitising

STOT-single exposure
not applicable

STOT-repeated exposure
not applicable

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>no data available</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
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Germ cell mutagenicity
No indications of human germ cell mutagenicity exist.

Reproductive toxicity
No indications of human reproductive toxicity exist.

Aspiration hazard
not applicable

Other adverse effects
no data available
SECTION 12: Ecological information

12.1 Ecotoxicity

Fish toxicity:
no data available

Daphnia toxicity:
no data available

Algae toxicity:
no data available

Bacteria toxicity:
no data available

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
Partition coefficient: n-octanol/water: no data available

12.4 Mobility in soil:
no data available

12.5 Results of PBT/vPvB assessment
no data available

12.6 Other adverse effects
no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Appropriate disposal / Product
Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal.

Waste code product: no data available

Appropriate disposal / Package
Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

Additional information
no data available
SECTION 14: Transport information

Land transport (DOT)

No dangerous good in sense of this transport regulation.

Sea transport (IMDG)

No dangerous good in sense of this transport regulation.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code not relevant
Air transport (ICAO-TI / IATA-DGR)

No dangerous good in sense of this transport regulation.

**SECTION 15: Regulatory information**

Safety, health and environmental regulations/legislation specific for the substance or mixture

**SARA 313 Components**

no data available

**Pennsylvania Right To Know Components**

no data available

**New Jersey Right To Know Components**

no data available

**California Prop. 65 Components**

no data available

**SECTION 16: Other information**

**Abbreviations and acronyms**

ACGIH - American Conference of Governmental Industrial Hygienists
DOT - Department of Transportation
IARC - International Agency for Research on Cancer
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations
ICAO-TI - International Civil Aviation Organization-Technical Instructions
IMDG - International Maritime Code for Dangerous Goods
LTV - Long Term Value
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - Occupational Safety & Health Administration
PBT - Persistent, Bioaccumulative and Toxic
PEL - Permissible Exposure Limit
STV - Short Term Value
SVHC - Substances of Very High Concern
TLV - Threshold Limit Value
vPvB - very Persistent, very Bioaccumulative
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
AGS - Committee on Hazardous Substances (Ausschuss für Gefahrstoffe)
CLP - Regulation on Classification, Labelling and Packaging of Substances and Mixtures
DFG - German Research Foundation (Deutsche Forschungsgemeinschaft)
Gestis - Information system on hazardous substances of the German Social Accident Insurance (Gefahrstoffinformationssystem der Deutschen Gesetzlichen Unfallversicherung)
RID - Regulation concerning the International Carriage of Dangerous Goods by Rail

Additional information

Indication of changes: general update

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guidance. The information in this document is based on the present state knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. VWR International and his Affiliates shall not be held liable for any damage resulting from handling.