

Address	Im Hackacker 15, CH-8902 Urdorf, Switzerland
Mail address	P.O. Box, CH-8902 Urdorf, Switzerland
Phone	+41-44-729 62 11
Fax	+41-44-729 66 36
Bank	Credit Suisse, 8070 Zurich, Clearing 4835
Account no.	370501-21-90 CHF/IBAN CH71 0483 5037 0501 2109 0

www.mt.com/pro

SAFETY DATA SHEET

according to Regulation (EU) No. 453/2010

Buffer Solution pH 4.64

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product code 51319015, 51319013, 51319014**Synonyms** None.

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

Use of the Substance/Preparation Laboratory chemicals

1.3. Details of the supplier of the safety data sheet

Company/Undertaking Identification	Mettler-Toledo AG Process Analytics Im Hackacker 15 CH-8902 Urdorf Schweiz Tel: +41-44-729 62 11 Fax: +41-44-729 66 36 Email: process.hotline@mt.com
---	---

1.4. Emergency telephone number +1-800-535 50 53 (Info Trac, 24 hrs)**Revision Date** 27.05.2013**Version** 6

2. Hazards identification

Causes skin irritation. Causes serious eye irritation

2.1. Classification of the substance or mixture

NFPA Ratings (Scale 0-4):

HEALTH=1

FLAMMABILITY=0

REACTIVITY=0

SPECIAL=0

HMIS Ratings (Scale: 0=Minimal 1=Slight 2=Moderate

3=Serious 4=Severe):

HEALTH=1

FLAMMABILITY=0

REACTIVITY=0

PROT. EQUIPMENT=B (Safety Glasses, Gloves)

Classification according to Regulation (EC) No. 1272/2008 (GHS/CLP)

Skin corrosion/irritation, Cat. 2, H315

Serious eye damage/eye irritation, Cat. 2, H319

The product is classified and labelled according to Regulation (EC) No. 1272/2008 (GHS/CLP).

Classification according to EU Directives 67/548/EEC or 1999/45/EC

None.

Additional information

For the full text of the phrases mentioned in this Section, see Section 16.

2.2. Label elements



Signal Word

Warning

Hazard Statements

H315: Causes skin irritation.

H319: Causes serious eye irritation.

Precautionary statements

P264a: Wash skin thoroughly after handling.

P280c: Wear protective gloves/ eye protection/ face protection.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313: If skin irritation occurs: Get medical advice/ attention.

P337+P313: If eye irritation persists: Get medical advice/ attention.

Additional advice

None.

GHS product identifier

Acetic acid, CAS-No. 64-19-7

Sodium hydroxide; caustic soda, CAS-No. 1310-73-2

Buffer Solution pH 4.64

V. 6 / 27.05.2013

Print Date 05.07.2013

Page 2/9

METTLER TOLEDO



2.3. Other hazards

No information available.

3. Composition/information on ingredients

Chemical characterization

Buffer solution.

Components		CLP Classification	DSD/DPD Classification	CAS	REACH No.
Deionised water	95% - 99%				
Acetic acid	1% - 2.5%	Skin Corr. 1A H314, Flam. Liq. 3 H226 [Skin Corr. 1A H314: C ≥ 90 % ; Skin Corr. 1B H314: 25 % ≤ C < 90 % ; Skin Irrit. 2 H315: 10 % ≤ C < 25 % ; Eye Irrit. 2 H319: 10 % ≤ C < 25 %]		64-19-7	
Sodium hydroxide; caustic soda	0.1% - 0.5%	Skin Corr. 1A H314 [Skin Corr. 1A H314: C ≥ 5 % ; Skin Corr. 1B H314: 2 % ≤ C < 5 % ; Skin Irrit. 2 H315: 0,5 % ≤ C < 2 % ; Eye Irrit. 2 H319: 0,5 % ≤ C < 2 %]		1310-73-2	

For the full text of the phrases mentioned in this Section, see Section 16.

Hazardous impurities

None known.

4. First aid measures

4.1. Description of first aid measures

Inhalation

Move to fresh air in case of accidental inhalation of vapours or decomposition products. Consult a physician for severe cases.

Skin contact

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

Eye contact

Rinse thoroughly with plenty of water, also under the eyelids. Consult an ophthalmologist.

Ingestion

Rinse mouth. Obtain medical attention.

4.2. Most important symptoms and effects, both acute and delayed

If you feel unwell, seek medical advice (show the label where possible).

Buffer Solution pH 4.64

4.3. Indication of any immediate medical attention and special treatment needed None known.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use dry chemical, CO₂, water spray or alcohol foam.

Extinguishing media which must not be used for safety reasons None.

5.2. Special hazards arising from the substance or mixture The product is not flammable. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

5.3. Advice for firefighters

Special protective equipment for firefighters Standard procedure for chemical fires. In the event of fire, wear self contained breathing apparatus. Wear protective suit.

Specific methods Water mist may be used to cool closed containers.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel Ensure adequate ventilation. Use personal protective equipment. Sweep up to prevent slipping hazard. Avoid contact with skin and eyes. Do not breathe vapours/dust.

Advice for emergency responders Handle in accordance with good industrial hygiene and safety practice.

6.2. Environmental precautions Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up Soak up with inert absorbent material. Keep in suitable and closed containers for disposal.

6.4. Reference to other sections See chapter 8 and 13.

7. Handling and storage

7.1. Precautions for safe handling	Wear personal protective equipment. Avoid contact with skin and eyes.
7.2. Conditions for safe storage, including any incompatibilities	Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Store in original container.
7.3. Specific end use(s)	No information available.

8. Exposure controls/personal protection

8.1. Control parameters

Exposure limit(s) No data is available on the product itself.

Acetic acid (CAS 64-19-7)

U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)	10 ppm TWA
U.S. - OSHA - Vacated PELs - TWAs	25 mg/m ³ TWA
	10 ppm TWA
	25 mg/m ³ TWA

Sodium hydroxide (CAS 1310-73-2)

U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)	2 mg/m ³ TWA
U.S. - OSHA - Vacated PELs - Ceilings	2 mg/m ³ Ceiling

8.2. Exposure controls

Occupational exposure controls Avoid contact with skin, eyes and clothing.

Personal protection equipment

Respiratory protection In case of good ventilation no personal respiratory protective equipment required.

Hand protection The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it. Solvent-resistant gloves (butylrubber).

Eye protection Safety glasses with side-shields conforming to EN 166.

Skin and body protection Long sleeved clothing.

Thermal hazards No special measures required.

Environmental exposure controls Prevent product from entering surface water or sewage.

Buffer Solution pH 4.64

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	Liquid.
Colour	Colourless.
Odour	None.
Odour Threshold	No information available.
pH:	4.6
Melting point/range:	No information available.
Boiling point/range:	No information available.
Flash point:	No information available.
Evaporation Rate:	No information available.
Flammability:	No information available.
Explosion limits:	No information available.
Vapour pressure:	No information available.
Vapor density:	No information available.
Relative density:	No information available.
Water solubility:	completely miscible
Partition coefficient (n-octanol/water):	No information available.
Autoignition temperature:	No information available.
Decomposition temperature:	No information available.
Viscosity:	No information available.
Combustion/explosion hazards:	not hazardous
Oxidizing properties:	None

9.2. Other information

10. Stability and reactivity

10.1. Reactivity	No information available.
10.2. Chemical stability	Stable at normal conditions.
10.3. Possibility of hazardous reactions	No information available.
10.4. Conditions to avoid	Not required.
10.5. Incompatible materials	None.
10.6. Hazardous decomposition products	None reasonably foreseeable.

Buffer Solution pH 4.64

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity	No data is available on the product itself. Acetic acid (CAS 64-19-7) Dermal LD50 Rabbit 1060 mg/kg Inhalation LC50 Rat 11.4 mg/L 4 h Oral LD50 Rat 3310 mg/kg Sodium hydroxide (CAS 1310-73-2) Dermal LD50 Rabbit 1350 mg/kg
Skin corrosion/irritation	Mild skin irritation.
Serious eye damage/eye irritation	Moderate eye irritation.
Respiratory / Skin Sensitisation	None.
Carcinogenicity	No data available.
Germ cell mutagenicity	No data available.
Reproductive toxicity	No data available.
Specific target organ toxicity (single exposure)	May cause irritation of respiratory tract.
Specific target organ toxicity (repeated exposure)	No data available.
Aspiration hazard	No data available.
Human experience	No data available.
Information on likely routes of exposure	dermal

12. Ecological information

12.1. Toxicity No data is available on the product itself.

Acetic acid (CAS 64-19-7)

Ecotoxicity - Freshwater Fish - Acute Toxicity Data

96 h LC50 Pimephales promelas: 79 mg/L [static]

96 h LC50 Lepomis macrochirus: 75 mg/L [static]

Ecotoxicity - Water Flea - Acute Toxicity Data

24 h EC50 Daphnia magna: 47 mg/L

48 h EC50 Daphnia magna: 65 mg/L [Static]

Sodium hydroxide (CAS 1310-73-2)

Ecotoxicity - Freshwater Fish - Acute Toxicity Data

96 h LC50 Oncorhynchus mykiss: 45.4 mg/L [static]

12.2. Persistence and degradability

Expected to be biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation is unlikely.

Buffer Solution pH 4.64

12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
12.6. Other adverse effects	No information available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Dispose of as unused product.

14. Transport information

ADR/RID	Not required.
IMO	Not required.
ICAO	Not required.
Further Information	Not classified as dangerous in the meaning of transport regulations.

15. Regulatory information

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

Regulatory Information	NFPA Ratings (Scale 0-4): HEALTH=1 FLAMMABILITY=0 REACTIVITY=0 SPECIAL=0 HMIS Ratings (Scale: 0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe): HEALTH=1 FLAMMABILITY=0 REACTIVITY=0 PROT. EQUIPMENT=B (Safety Glasses, Gloves)
-------------------------------	---

15.2. Chemical safety assessment	Not required.
---	---------------

Buffer Solution pH 4.64



16. Other information

Key or legend to abbreviations and acronyms

None.

Key literature references and sources for data

Information taken from reference works and the literature.

Classification procedure

Calculation method.

Full text of phrases referred to under sections 2 and 3

H226: Flammable liquid and vapour.
H314: Causes severe skin burns and eye damage.
H315: Causes skin irritation.
H319: Causes serious eye irritation.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release. It is not to be considered a warranty or quality specification.