PREPARED BY: SAFETY COMMITTEE, THOMAS BAKER (CHEMICALS) PVT. LTD. FACTORY: B3 & B4 MIDC, Chemical Zone, Ambernath (W) 421 501,Dist: Thane, India Tel: + 91 251 2610140 / 2610394 / 2610829 / 2606947 Email: info@thomasbaker.com | sales@thomasbaker.com GST No. 27AAACT4221B1ZY | CIN No. U24114MH1980PTC023396 Revision Date 01.06.2022



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

1.1 Product identifiers

Product name : Acetate buffer for chlorine (APHA) pH4

Article No. : 0732

Brand : Thomas Baker

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company Name: Thomas Baker (Chemicals) Pvt. Ltd.

B3 & B4, MIDC, Chemical Zone, Ambernath 421501. Dist: Thane, India.

1.4 Emergency telephone

Emergency Phone # : +91 9307304329

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS-US classification

Skin corrosion/irritation Category 2 H315
Serious eye damage/eye irritation Category 2A H319
Hazardous to the aquatic environment - Acute Hazard Category 3 H402

2.2 Other hazards

Other hazards not contributing to the classification : None under normal conditions.

LABEL PRECAUTIONARY STATEMENTS

Harmful

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS No.	Qty %
Sodium Hydroxide 50%	1310-73-2	0.5%
Acetic acid	64-19-7	1.43%
DM water	7732-18-5	98.07%

SYNONYMS: Buffer solution PH=4

Composition: Aqueous buffer solution (Acetic acid/Sodium hydroxide)



PREPARED BY: SAFETY COMMITTEE, THOMAS BAKER (CHEMICALS) PVT. LTD. FACTORY: B3 & B4 MIDC, Chemical Zone, Ambernath (W) 421 501,Dist: Thane, India Tel: + 91 251 2610140 / 2610394 / 2610829 / 2606947 Email: info@thomasbaker.com | sales@thomasbaker.com GST No. 27AAACT4221B1ZY | CIN No. U24114MH1980PTC023396 Revision Date 01.06.2022



SECTION 4: FIRST-AID MEASURES

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person.

If you feel unwell, seek medical

advice (show the label where possible).

First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated

Clothing before reuse. If skin irritation

occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists

: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting.

Obtain emergency medical attention.

4.2. Indication of any immediate medical attention and special treatment needed

Obtain medical assistance.

SECTION 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers.

Exercise caution when fighting any chemical fire. Prevent fire-fighting water

from entering environment.

Protection during firefighting: Do not enter fire area without proper protective equipment, including

respiratory protection.



PREPARED BY: SAFETY COMMITTEE, THOMAS BAKER (CHEMICALS) PVT. LTD. FACTORY: B3 & B4 MIDC, Chemical Zone, Ambernath (W) 421 501,Dist: Thane, India Tel: + 91 251 2610140 / 2610394 / 2610829 / 2606947 Email: info@thomasbaker.com | sales@thomasbaker.com GST No. 27AAACT4221B1ZY | CIN No. U24114MH1980PTC023396 Revision Date 01.06.2022



SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment: Safety glasses. Gloves.

Emergency procedures: Evacuate unnecessary personnel

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and

water before eating, drinking or smoking and when leaving work

Provide good ventilation in process area to prevent formation of vapor.

Hygiene measures : Wash exposed skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use.

Incompatible products : Strong oxidizers.

Incompatible materials : Sources of ignition. Direct sunlight.



PREPARED BY: SAFETY COMMITTEE, THOMAS BAKER (CHEMICALS) PVT. LTD. FACTORY: B3 & B4 MIDC, Chemical Zone, Ambernath (W) 421 501,Dist: Thane, India Tel: + 91 251 2610140 / 2610394 / 2610829 / 2606947 Email: info@thomasbaker.com | sales@thomasbaker.com GST No. 27AAACT4221B1ZY | CIN No. U24114MH1980PTC023396



Revision Date 01.06.2022

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoide

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

Boiling Pt./Range : 100-110 °C Physical State : liquid Appearance : Colourless liquid M.Pt./Freezing Pt. Vapour Pressure @ 20°C : 1.82KPa Odour : odourless Vapour Density (Air = 1) Solubility in water @20°C : Soluble : 1.5 Evaporation rate Specific Gravity (Water = 1): $1.1g/cm^3$: ---PH (20°C) **:** 4.0 (acidic) Others : ---

Coeff of water/oil distribution : ---



PREPARED BY: SAFETY COMMITTEE, THOMAS BAKER (CHEMICALS) PVT. LTD. FACTORY: B3 & B4 MIDC, Chemical Zone, Ambernath (W) 421 501,Dist: Thane, India Tel: + 91 251 2610140 / 2610394 / 2610829 / 2606947 Email: info@thomasbaker.com | sales@thomasbaker.com GST No. 27AAACT4221B1ZY | CIN No. U24114MH1980PTC023396



SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

Revision Date 01.06.2022

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Likely routes of exposure : Skin and eye contact; Inhalation

Acute toxicity

: Not classified

Acetic Acid (64-19-7)

LD50 oral rat 3310 mg/kg body weight (Rat; Other; Read-across)

ATE US (oral) 3310.000 mg/kg body weight

Water (7732-18-5)

LD50 oral rat $\geq 90000 \text{ mg/kg}$

ATE US (oral) 90000.000 mg/kg body weight

Skin corrosion/irritation : Causes skin irritation.

pH: 4

Serious eye damage/irritation : Causes serious eye irritation.

pH: 4

Respiratory or skin sensitization
Germ cell mutagenicity
: Not classified
Carcinogenicity
: Not classified
Reproductive toxicity
: Not classified
: Not classified

Specific target organ toxicity

(single exposure) : Not classified

Specific target organ toxicity (repeated

exposure)

: Not classified

Aspiration hazard : Not classified



PREPARED BY: SAFETY COMMITTEE, THOMAS BAKER (CHEMICALS) PVT. LTD. FACTORY: B3 & B4 MIDC, Chemical Zone, Ambernath (W) 421 501,Dist: Thane, India Tel: + 91 251 2610140 / 2610394 / 2610829 / 2606947 Email: info@thomasbaker.com | sales@thomasbaker.com GST No. 27AAACT4221B1ZY | CIN No. U24114MH1980PTC023396



Revision Date 01.06.2022

Potential Adverse human health effects and symptoms

: Based on available data, the classification criteria are not met.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye irritation

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - water : Harmful to aquatic life.

12.2. Persistence and degradability

Acetate Buffer pH 4.0 for Chlorine, Iodine

Persistence and degradability Not established.

Acetic Acid (64-19-7)

Persistence and degradability Readily biodegradable in water. Biodegradable in the soil.

Highly mobile in soil.

Biochemical oxygen demand (BOD) $0.6 - 0.74 \text{ g } O_2/\text{g}$ substance Chemical oxygen demand (COD) $1.03 \text{ g } O_2/\text{g}$ substance

ThOD $1.07 \text{ g O}_2/\text{g substance}$

Sodium Acetate, Trihydrate (6131-90-4)

Persistence and degradability Not established.

Water (7732-18-5)

Persistence and degradability Not established.

12.3. Bioaccumulative potential

Acetate Buffer pH 4.0 for Chlorine, Iodine

Bioaccumulative potential Not established.

Acetic Acid (64-19-7)

BCF fish 1 3.16 (BCF; Pisces)

Log Pow -0.17 (Experimental value; 25 °C)

Bioaccumulative potential Low potential for bioaccumulation (Log Kow < 4).

Sodium Acetate, Trihydrate (6131-90-4)

Bioaccumulative potential Not established.

Water (7732-18-5)

Bioaccumulative potential Not established.

12.4. Mobility in soil Acetic Acid (64-19-7)

Surface tension 0.028 N/m (20 °C) Log Koc log Koc,0.06; QSAR

Ecology - soil May be harmful to plant growth, blooming and fruit formation.

12.5. Other adverse effects

Effect on the global warming : No known effects from this product.

GWPmix comment : No known effects from this product.



PREPARED BY: SAFETY COMMITTEE, THOMAS BAKER (CHEMICALS) PVT. LTD. FACTORY: B3 & B4 MIDC, Chemical Zone, Ambernath (W) 421 501,Dist: Thane, India Tel: + 91 251 2610140 / 2610394 / 2610829 / 2606947 Email: info@thomasbaker.com | sales@thomasbaker.com GST No. 27AAACT4221B1ZY | CIN No. U24114MH1980PTC023396



Revision Date 01.06.2022

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance
With local/national regulations. Dispose of

Contents/container to comply with local, state and federal regulation

Ecology - waste materials : Avoid release to the environment

14: TRANSPORT INFORMATION

Department of Transportation (DOT)

In accordance with DOT

Not regulate

SECTION 15: REGULATORY INFORMATION

15.1. US Federal regulations

Acetate Buffer pH 4.0 for Chlorine, Iodine

SARA Section 311/312 Hazard Classes Immediate (acute) health hazard

Acetic Acid (64-19-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory Not subject to reporting requirements of the United States SARA Section 313

RQ (Reportable quantity, section 304 of EPA's

List of Lists) 5000 lb

Sodium Acetate, Trihvdrate (6131-90-4)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

Water (7732-18-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Acetate Buffer pH 4.0 for Chlorine, Iodine

WHMIS Classification Class D Division 2 Subdivision B –

Toxic material causing other toxic effects

Acetic Acid (64-19-7)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification Class B Division 3 - Combustible Liquid

Class E - Corrosive Material

Sodium Acetate, Trihydrate (6131-90-4)

Not listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification Uncontrolled product according to



PREPARED BY: SAFETY COMMITTEE, THOMAS BAKER (CHEMICALS) PVT. LTD. FACTORY: B3 & B4 MIDC, Chemical Zone, Ambernath (W) 421 501,Dist: Thane, India Tel: + 91 251 2610140 / 2610394 / 2610829 / 2606947 Email: info@thomas baker.com | sales@thomasbaker.com GST No. 27AAACT4221B1ZY | CIN No. U24114MH1980PTC023396 Revision Date 01.06.2022



WHMIS classification criteria

Water (7732-18-5) WHMIS Classification

Uncontrolled product according to WHMIS classification criteria

EU-Regulations

No additional information available

National regulations

Acetic Acid (64-19-7)

Listed on the Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, Developmental and/or reproductive harm

SECTION 16: OTHER INFORMATION

H226	Flammable liquid and vapor
Н314	Causes severe skin burns and eye damage
Н315	Causes skin irritation
Н318	Causes serious eye damage
Н319	Causes serious eye irritation
H402	Harmful to aquatic life



Information contained in this "Safety Data Sheet" is believed to be reliable but no representation, guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. It is up to the manufacturer / seller/ user to ensure that the information contained in the safety data sheet is relevant to the product manufactured / handled or sold by him as the case may be. We make no warranties expressed or implied in respect of the adequacy of this document for any particular purposey particular purpose.

