SAFETY DATA SHEET

Issue Date 02-May-2025
Revision Number 3.08

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier
Product Name 25% Hydrogen Bromide-Acetic Acid Solution
Other means of identification
Product Code(s) 080-04001,082-04005,088-04002

Recommended use of the chemical and restrictions on use
Recommended Use For research use only.
Uses advised against Seek expert judgment when using for purposes other than those recommended.

Details of the supplier of the safety data sheet

Manufacturer Address
FUJIFILM Wako Pure Chemical Corporation
1-2, Doshomachi 3-Chome,
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Distributor
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2. HAZARDS IDENTIFICATION

GHS classification
Classification of the substance or mixture

Flammable liquids	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4
Skin corrosion/irritation	Category 1 A
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 1
Category 1 blood, respiratory system	
Specific target organ toxicity (repeated exposure)	Category 1
Category 1 respiratory system, teeth	
Acute aquatic toxicity	Category 3

Pictograms

Signal word Danger

Hazard statements
H227 - Combustible liquid
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H312 - Harmful in contact with skin
H332 - Harmful if inhaled
H402 - Harmful to aquatic life
H370 - Causes damage to the following organs: blood, respiratory system
H372 - Causes damage to the following organs through prolonged or repeated exposure: respiratory system, teeth

Precautionary statements-(Prevention)

Wear protective gloves/protective clothing/eye protection/face protection Use only outdoors or in a well-ventilated area Do not breathe dust/fume/gas/mist/vapors/spray Wash face, hands and any exposed skin thoroughly after handling Do not eat, drink or smoke when using this product Avoid release to the environment Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Precautionary statements-(Response)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician

Call a POISON CENTER or doctor/physician if you feel unwell Wash contaminated clothing before reuse IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Call a POISON CENTER or doctor/physician if you feel unwell

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

In case of fire: Use suitable extinguishing media for extinction

Precautionary statements-(Storage)

Store locked up Store in a well-ventilated place. Keep cool

Precautionary statements-(Disposal)

Dispose of contents/container to an approved waste disposal plant

Others

Other hazards Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture Mixture

Chemical Name	Molecular weight	CAS RN	Weight-%
Acetic Acid	60.05	64-19-7	74.0 - 76.0
Hydrogen bromide	80.91	10035-10-6	24.0 - 26.0

Impurities and/or Additives： Not applicable

4. FIRST AID MEASURES

First aid measures

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash skin with soap and water.

Inhalation Remove to fresh air.

Ingestion Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing media

Carbon dioxide (CO2). Foam. Extinguishing powder. Sand.

Specific hazards arising from the chemical
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Explosion data
Sensitivity to Mechanical Impact none.
Sensitivity to Static Discharge none.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods and material for containment and cleaning up Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical measures Keep away from heat/sparks/open flames/hot surfaces. - No smoking.Use with local exhaust ventilation.
Protective measures Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage conditions Keep container protect from light tightly closed. Store in a cool (2-10 °C) place. Store locked up.

Packaging materials Glass.

Incompatible materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls
In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

Exposure limits

Chemical Name	ACGIH	OSHA PEL	NIOSH IDLH
Acetic Acid 64-19-7	STEL: 15 ppm TWA: 10 ppm	TWA: 10 ppm TWA: 25 mg/m^3 (vacated) TWA: 10 ppm (vacated) TWA: 25 mg/m^3	IDLH: 50 ppm TWA: 10 ppm TWA: 25 mg/m^3 STEL: 15 ppm

			STEL: 37 mg/m³
Hydrogen bromide 10035-10-6	Ceiling: 2 ppm	TWA: 3 ppm TWA: 10 mg/m³ (vacated) Ceiling: 3 ppm (vacated) Ceiling: 10 mg/m³	IDLH: 30 ppm Ceiling: 3 ppm Ceiling: 10 mg/m³

Personal protective equipment

Respiratory protection Protective mask
Hand protection chemical protective gloves (JIS T 8116)
Eye protection protective eyeglasses or chemical safety goggles (JIS T 8147)
Skin and body protection Long-sleeved work clothes

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form

Color Colorless - pale yellow
Turbidity clear
Appearance liquid
Odor Pungent odor
pH Strongly acidic
Melting point/freezing point no data available
Boiling point, initial boiling point and boiling range no data available
Flash point 75 °C
Evaporation rate: no data available
Flammability (solid, gas): no data available
Upper/lower flammability or explosive limits
Upper: no data available
Lower: no data available
Vapour pressure no data available
Vapour density no data available
Specific Gravity / Relative density 1.3 g/mL
Solubilities water , Ethanol : Very soluble.
n-Octanol/water partition coefficient:(log Pow) no data available
Auto-ignition temperature: no data available
Decomposition temperature: no data available
Viscosity (coefficient of viscosity) no data available
Dynamic viscosity no data available
Particle characteristics no data available

10. STABILITY AND REACTIVITY

Stability

Chemical stability May be altered by light.
Reactivity no data available

Hazardous reactions

None under normal processing

Conditions to avoid

Extremes of temperature and direct sunlight, Heat, flames and sparks, static electricity, spark

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon monooxide (CO), Carbon dioxide (CO2), Halides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Acetic Acid	3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	N/A
Hydrogen bromide	N/A	N/A	1430 ppm (Rat) 4 h

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas- source information
Acetic Acid	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Hydrogen bromide	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Chemical Name	Acute toxicity -inhalation vapor- source information	Acute toxicity -inhalation dust- source information	Acute toxicity -inhalation mist- source information
Acetic Acid	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Hydrogen bromide	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Skin irritation/corrosion

Chemical Name	Skin corrosion/irritation source information
Acetic Acid	Based on the NITE GHS classification results.
Hydrogen bromide	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
Acetic Acid	Based on the NITE GHS classification results.
Hydrogen bromide	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
Acetic Acid	Based on the NITE GHS classification results.
Hydrogen bromide	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Chemical Name	germ cell mutagencity source information
Acetic Acid	Based on the NITE GHS classification results.
Hydrogen bromide	Based on the NITE GHS classification results.

Carcinogenicity

Chemical Name	Carcinogenicity source information
Acetic Acid	Based on the NITE GHS classification results.
Hydrogen bromide	Based on the NITE GHS classification results.

Reproductive toxicity

Chemical Name	Reproductive toxicity source information
Acetic Acid	Based on the NITE GHS classification results.
Hydrogen bromide	Based on the NITE GHS classification results.

STOT-single exposure

Chemical Name	STOT -single exposure- source information
Acetic Acid	Based on the NITE GHS classification results.
Hydrogen bromide	Based on the NITE GHS classification results.

STOT-repeated exposure

Chemical Name	STOT -repeated exposure- source information
Acetic Acid	Based on the NITE GHS classification results.
Hydrogen bromide	Based on the NITE GHS classification results.

Aspiration hazard

Chemical Name	Aspiration Hazard source information
Acetic Acid	Based on the NITE GHS classification results.
Hydrogen bromide	Based on the NITE GHS classification results.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Acetic Acid 64-19-7	N/A	LC50 : Pimephales promelas 79 mg/L 96 h	N/A	EC50 : Daphnia magna 65000 ug/L 48 h

Persistence and degradability
No information available

Bioaccumulative potential
No information available

Mobility

Chemical Name	Partition coefficient
Acetic Acid 64-19-7	2.05

Mobility in soil No information available
Other Data No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Precautionary including method of disposing contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

DOT
UN/ID No UN3265
Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Mixture of Acetic Acid and Hydrogen Bromide)
UN classfication 8
Subsidiary hazard class
Packing group III
Marine pollutant Not applicable

IATA
UN/ID No UN3265
Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Mixture of Acetic Acid and Hydrogen Bromide)
UN classfication 8
Subsidiary hazard class
Packing group III
Environmentally Hazardous Substance Not applicable

IMDG
UN/ID No UN3265
Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Mixture of Acetic Acid and Hydrogen Bromide)
UN classfication 8

Subsidiary hazard class
Packing group III
Marine pollutant (Sea) Not applicable

15. REGULATORY INFORMATION

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS RN	Weight-%	SARA 313 - Threshold Values %
Acetic Acid - 64-19-7	64-19-7	74.0 - 76.0	N/A
Hydrogen bromide - 10035-10-6	10035-10-6	24.0 - 26.0	N/A

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Acetic Acid 64-19-7	5000 lb	N/A	N/A	X

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Acetic Acid 64-19-7	5000 lb	N/A	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65
This product does not contain any chemicals regulated by Proposition 65

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Acetic Acid 64-19-7	X	X	X
Hydrogen bromide 10035-10-6	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

Issue Date 25-Apr-2025
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Revision Note

No information available

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 and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet