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Version: 1.0

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

### 1.1. Product identifier

Trade name/designation:	Acetic Acid
Product No.:	BDH3092-500MLP BDH3093-2.2LP BDH3094-2.5LG BDH3096-2.5LPC BDH3098-3.8LP BDH3100-19L BDH3102-201L
Other means of identification: Ethanoic acid, Ethylic acid, Methane carboxylic acid	

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

Relevant identified uses: Manufacturing or Laboratory use

### 1.3. Details of the supplier of the safety data sheet

Company VWR International, LLC  
Radnor Corporate Center  
100 Matsonford Road  
Radnor, PA 19087-8660  
Telephone 610.386.1700

### 1.4. Emergency Telephone number

CHEMTREC 800.424.9300  
CANUTEC 613.996.6666

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

For the full text of the H-Statement(s) and R-phrases(s) mentioned in this Section, see Section 16.

Hazard classes and hazard categories	Hazard statements
Flammable liquids; Category 3	Flammable liquid and vapour
Skin corrosion; Category 1A	Causes severe skin burns and eye damage

Serious eye damage; Category 1	Causes serious eye damage
Acute toxicity, oral; Category 5	May be harmful if swallowed
Acute toxicity, dermal; Category 4	Harmful in contact with skin
Acute toxicity, inhalation; Category 4	Harmful if inhaled
Skin sensitization; Category 1	May cause an allergic skin reaction

## 2.2. GHS Label elements, including precautionary statements



Signal word    Danger

Hazard statements	
H226	Flammable liquid and vapour.
H303+H332	May be harmful if swallowed or if inhaled.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

Precautionary statements	
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/Bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do not induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several

	minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/physician.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use appropriate media to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

### 2.3. WHIMS Classification

Class B-3: Flammable and combustible material - Combustible liquid  
Class E: Corrosive material

### 2.4. Hazards not otherwise classified (HNOC) or not covered by GHS or WHIMS

Lachrymator

## SECTION 3: Composition / information on ingredients

### 3.1. Hazard components

Chemical name	Formula	Molecular weight	CAS#	Weight%
Acetic Acid	C <sub>2</sub> H <sub>4</sub> O <sub>2</sub>	60.05 g/mol	64-19-7	>99

## SECTION 4: First aid measures

### 4.1. General information

#### In case of inhalation

Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respirations.

#### In case of skin contact

Flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.

#### In case of eye contact

Immediately rinse with plenty of water for at least 15 minutes and seek medical attention.

### **In case of ingestion**

**Do Not Induce Vomiting!** Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

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

Ingestion or inhalation of concentrated acetic acid causes damage to tissues of the respiratory and digestive tracts. Material is destructive to tissues of the mucosa membranes and upper respiratory tract. Symptoms include: hematemesis, bloody diarrhea, edema and/or perforation of the esophagus and pylorus, pancreatitis, hematuria, anuria, uremia, albuminuria, hemolysis, convulsions, bronchitis, pulmonary edema, pneumonia, cardiovascular collapse, shock, and death. Direct contact or exposure to high concentrations of vapor with skin or eyes can cause: erythema, blisters, tissue destruction with slow healing, skin blackening, hyperkeratosis, fissures, corneal erosion, opacification, iritis, conjunctivitis, and possible blindness.

### **4.3. Indication of any immediate medical attention and special treatment needed**

Not Available

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Use appropriate media for adjacent fire. Cool unopened containers with water.

### **5.2. Special hazards arising from the substance or mixture**

Oxides of carbon

### **5.3. Special protective equipment for firefighters**

Not Available

### **5.4. Hazardous combustion products**

Not Available

### **5.5. Advice for firefighters**

Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

### **5.6. Additional information**

Not Available

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

See section 8 for recommendations on the use of personal protective equipment.

### 6.2. Environmental precautions

Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.

### 6.3. Methods and material for containment and cleaning up

Neutralize spill with sodium bicarbonate or soda lime. Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

### 6.4. Additional information

Not Available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols. Keep away from sources of ignition. No smoking. Take measures to prevent the build-up of electrostatic charge.

### 7.2. Conditions for safe storage, including any incompatibilities

Store in cool, dry, well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

### 7.3. Specific end use(s)

Not Available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Chemical Name	Limit value type & Country of Origin	Exposure Limit value	Source
Acetic Acid	PEL	10 ppm 25 mg/m <sup>3</sup>	OSHA
	TLV	10 ppm 25 mg/m <sup>3</sup>	ACGIH
	STEL	15 ppm 37 mg/m <sup>3</sup>	ACGIH
	REL	10 ppm 25 mg/m <sup>3</sup>	NIOSH
	STEL	15 ppm 37 mg/m <sup>3</sup>	NIOSH

### 8.2. Exposure controls

#### Appropriate engineering controls

Showers  
Eye wash stations  
Ventilation system

#### Personal protection equipment

##### Eye/face protection

Safety glasses or goggles with face shield

##### Skin protection

Nitrile or rubber gloves and full body protection

##### Respiratory protection

Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practices.

## SECTION 9: Physical and Chemical Properties

### 9.1. Information on basic physical and chemical properties

- a) Appearance:  
Physical state                      Liquid  
Color                                      Clear, colorless

b) Odor	Pungent, vinegar-like
c) Odor Threshold	0.48 ppm
d) pH	2.4 at 60.05 g/L
e) Melting point/ freezing point	16.6°C (61.9°F)
f) Initial boiling point and boiling range	118.1°C (244.6°F)
g) Flash point	Closed Cup: 39°C (102.2°F) Open Cup: 43°C (109.4°F)
h) Evaporation rate	Not Available
i) Flammability (solid, gas)	Not Available
j) Upper/lower flammability or explosive limits	Upper: 19.9% (V) Lower: 4% (V)
k) Vapor pressure	1.5 kPa at 20°C
l) Vapor density	2.07 (air = 1)
m) Relative density	1.049 (water = 1)
n) Solubilities	Miscible in water
o) Partition coefficient (n-Octanol/Water)	log Pow: -0.17
p) Auto-ignition temperature	463°C (865.4°F)
q) Decomposition temperature	Not Available
r) Viscosity	Not Available
s) Explosive properties	Not Available
t) Oxidizing properties	Not Available

## 9.2. Other information

Not Available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Not Available

### 10.2. Chemical stability

Stable under normal storage conditions

### 10.3. Possibility of hazardous reactions

Not Available

### 10.4. Conditions to avoid

Heat, flames, sparks

## 10.5. Incompatible materials

Oxidizing agents, soluble carbonates and phosphates, hydroxides, metals, peroxides, permanganates (e.g. potassium permanganate), amines, alcohols

## 10.6. Hazardous decomposition products

Oxides of carbon

## SECTION 11: Toxicology

### 11.1. Information on toxicological effects

#### Acute toxicity

**Oral LD<sub>50</sub>** – rat – 3310 mg/kg

**Inhalation LC<sub>50</sub>** – mouse – 5,620 ppm – 1h

**Dermal LD<sub>50</sub>** – rabbit – 1,112 mg/kg

**Other information on acute toxicity**

#### Skin corrosion/irritation

Not Available

#### Serious eye damage/eye irritation

Eyes – rabbit

Result: Corrosive to eyes

#### Respiratory or skin sensitization

Not Available

#### Germ cell mutagenicity

Not Available

#### Carcinogenicity

Not Available

#### Reproductive toxicity

Not Available

#### Specific target organ toxicity-single exposure

Not Available

**Specific target organ toxicity-repeated exposure**

Not Available

**Aspiration hazard**

Not Available

**Additional information**

Not Available

## SECTION 12: Ecological information

**12.1. Ecotoxicity**

LC50 – Pimephales promelas – 79-88 mg/l – 96h

LC50 Lepomis macrochirus – 75 mg/l – 96h

EC50 – Daphnia magna – 65 mg/l – 48h

**12.2. Persistence and degradability**

Aerobic: 99% - readily biodegradable

**12.3. Bioaccumulative potential**

Not Available

**12.4. Mobility in soil**

Not Available

**12.5. Results of PBT and vPvB assessment**

Not Available

**12.6. Other adverse effects**

Biochemical Oxygen Demand (BOD): 880 mg/g

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

## SECTION 14: Transport information

### Land Transport DOT (U.S.)

UN Number 2789  
Proper Shipping name Acetic acid, glacial  
Transport Hazard Classes  
Class 8  
Hazard Label(s) 8, (3)  
Packing Group II  
Environmental hazard(s)  
Special precautions for user

### Sea Transport IMDG

UN Number 2789  
Proper Shipping name ACETIC ACID, GLACIAL  
Transport Hazard Classes  
Class 8  
Hazard Label(s) 8, (3)  
EMS- No. F-E, S-C  
Packing Group II  
Environmental hazard(s)  
Segregation Group  
Special precautions for user

### Air Transport IATA

UN Number 2789  
Proper Shipping name Acetic acid, glacial  
Transport Hazard Classes  
Class 8  
Hazard Label(s) 8, (3)  
Packing Group II  
Environmental hazard(s)  
Special precautions for user

## SECTION 15: Regulatory information

### OSHA Hazards

Corrosive, Flammable liquid, Target organ effect, Harmful by skin absorption, Skin sensitizer

### SARA 302 Extremely Hazardous Substances

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

### SARA 313 (TRI reporting)

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazardous Chemicals

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

### Massachusetts Right-To-Know Substance List

Acetic acid

### Pennsylvania Right-To-Know Hazardous substances

Acetic acid

### New Jersey Worker and Community Right-To-Know Components

Acetic acid

### California Proposition 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### Inventory status:

Canada DSL Inventory List: Listed

US TSCA Inventory List: Listed

EINECS: 200-580-7

## SECTION 16: Other information

### Full text of H-Statement(s) and R-phrase(s)

- H226 Flammable liquid and vapour
- H303 May be harmful if swallowed
- H312 Harmful in contact with skin
- H314 Causes severe skin burns and eye damage
- H317 May cause an allergic skin reaction
- H318 Causes serious eye damage
- H331 Toxic if inhaled
  
- R10 Flammable
- R35 Causes severe burns

### Canadian Carcinogenicity hazard class

PHNOC hazard class

HHNOC hazard class

Biohazardous Infectious Materials hazard class

### NFPA Rating:

Health: 3

Flammability: 2

Reactivity: 0

Special Hazard: N/A



### DISCLAIMER

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our 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 its Affiliates shall not be held liable for any damage resulting from handling.