Safety Data Sheet

Revision date: 02/23/2015 *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-phrase(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

Pictogram 

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	$C_2H_4O_2$	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^3	OSHA
	TLV	10 ppm 25 mg/m^3	ACGIH
	STEL	15 ppm 37 mg/m^3	ACGIH
	REL	10 ppm 25 mg/m^3	NIOSH
	STEL	15 ppm 37 mg/m^3	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)	Solublities	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_{50} – rat – 3310 mg/kg

Inhalation LC_{50} – mouse – 5,620 ppm – 1h

Dermal LD_{50} – 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)
Segregration 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 Propostion 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.