Revision date: 04/13/2015 *Version: 1.0*

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

1.1. Product identifier

Trade name/designation:	Sulfuric Acid
Product No.:	BDH3068-500MLP BDH3070-2.5LPC BDH3072-2.5LG BDH3074-3.8LP BDH3076-19L BDH3078-56L BDH3088-111L BDH3090-185L BDH3132-2.2LP TXBDH307438CPI
Other means of identification: Oil of Vitriol, Battery Acid, Sulphuric Acid, Dihydrogen Sulfate	

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

Relevant identified uses: Manufacturing and 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
Skin corrosion; Category 1A	Causes severe skin burns and eye damage
Serious eye damage; Category 1	Causes serious eye damage
Acute aquatic toxicity; Category 3	Harmful to aquatic life

2.2. GHS Label elements, including precautionary statements

Pictograms 

Signal word Danger

Hazard statements	
H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.

Precautionary statements	
P260	Do not breathe mists.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
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.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

2.3. WHIMS Classification

Class E: Corrosive material

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

Not Available

SECTION 3: Composition / information on ingredients

3.1. Hazard components

Chemical name	Formula	Molecular weight	CAS#	Weight%
Sulfuric Acid	H_2SO_4	98.08 g/mol	7664-93-9	93-98

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

May cause deep, penetrating ulcers of the skin. Contact with skin may cause inflammation and severe burns. Contact to eyes may cause severe burns and possible irreversible eye damage including corneal injury and cataracts. Inhalation may cause coughing burns and breathing difficulty. Ingestion may cause burns, swelling of the lips, mouth, and larynx, throat constriction, nausea, vomiting, convulsions, shock, and may cause severe and permanent damage to gastrointestinal tract.

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

Hydrogen sulfide gas

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.

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
Sulfuric Acid	0.2 mg/m^3	TLV	ACGIH
	1 mg/m^3	PEL	OSHA
	1 mg/m^3	REL	NIOSH
	15 mg/m^3	IDLH	OSHA

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	Not Available
c)	Odor Threshold	Not Available
d)	pH	1
e)	Melting point/ freezing point	3°C (37°F)
f)	Initial boiling point and boiling range	290°C (554°F)
g)	Flash point	Not Available
h)	Evaporation rate	Not Available
i)	Flammability (solid, gas)	Not Available
j)	Upper/lower flammability or explosive limits	Not Available
k)	Vapor pressure	Not Available
l)	Vapor density	Not Available
m)	Relative density	1.84
n)	Solublities	Soluble in water
o)	Partition coefficient (n-Octanol/Water)	Not Available
p)	Auto-ignition temperature	Not Available
q)	Decomposition temperature	
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

Uncontrolled additions of water

10.5. Incompatible materials

Bases, halides, organic material, carbides, chlorates, fulminates, nitrates, picrates, cyanides, cyclopentadiene, cyclopentanone oxime, nitroaryl amines, hexalithium disilicide, phosphorus (III) oxide, powdered metals

10.6. Hazardous decomposition products

Hydrogen chloride gas

SECTION 11: Toxicology

11.1. Information on toxicological effects

Acute toxicity

Oral LD_{50}

Inhalation LC_{50}

Dermal LD_{50}

Other information on acute toxicity

Skin corrosion/irritation

Skin – Rabbit – Result: Extremely corrosive and destructive to tissue

Serious eye damage/eye irritation

Eyes – Rabbit – Result: Corrosive to eyes

Respiratory or skin sensitization

Not Available

Germ cell mutagenicity

Not Available

Carcinogenicity

IARC – 1: Carcinogenic to humans (aerosol form)
ACGIH – A2: Suspected human carcinogen (aerosol form)

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 – Gambusia affinis – 42 mg/L – 96h
EC50 - Daphnia magna (Water flea) - 29 mg/l - 24 h

12.2. Persistence and degradability

Not Available

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

Not Available

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 1830
Proper Shipping name Sulfuric acid
Transport Hazard Classes
Class 8
Hazard Label(s) 8
Packing Group II
Environmental hazard(s)
Special precautions for user

Sea Transport IMDG

UN Number 1830
Proper Shipping name Sulfuric acid
Transport Hazard Classes
Class 8
Hazard Label(s) 8
EMS- No. F-A, S-B
Packing Group II
Environmental hazard(s)
Segregration Group
Special precautions for user

Air Transport IATA

UN Number 1830

Proper Shipping name Sulfuric acid
Transport Hazard Classes
Class 8
Hazard Label(s) 8
Packing Group II
Environmental hazard(s)
Special precautions for user

SECTION 15: Regulatory information

OSHA Hazards
Corrosive

SARA 302 Extremely Hazardous Substances
Sulfuric Acid

SARA 313 (TRI reporting)
Sulfuric Acid

SARA 311/312 Hazardous Chemicals
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right-To-Know Substance List
Sulfuric Acid

Pennsylvania Right-To-Know Hazardous substances
Sulfuric Acid

New Jersey Worker and Community Right-To-Know Components
Sulfuric Acid

California Propostion 65
Sulfuric Acid

Inventory status:
Canada DSL Inventory List: Listed
US TSCA Inventory List: Listed
EINECS, ELINCS or NLP: 231-939-5

SECTION 16: Other information

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

H314 Causes severe skin burns and eye damage.
H402 Harmful to aquatic life.

R34 Causes burns.

Canadian Carcinogenicity hazard class
PHNOC hazard class
HHNOC hazard class
Biohazardous Infectious Materials hazard class

NFPA Rating:
Health: 3
Flammability: 0
Reactivity: 2
Special Hazard: W

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.