



Safety Data Sheet

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Section 1 - Identification

1.1 Product Identifier

Product Name : Acetone

CAS No. : 67-64-1

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 : 9920 Pacific Heights Blvd
Suit 150
San Diego
California -92121

1.4 Emergency Telephone number

Emergency phone : +1 (858) 245-0283

Section 2: Hazard Identification

2.1 Classification of the substance or the mixture

Flammable liquids	Category 2	H225:Highly flammable liquid and vapor.
Eye irritation	Category 2	H319:Causes serious eye irritation.
Specific target organ toxicity -single exposure	Category 3	H336:May cause drowsiness or dizziness.

2.2 Label elements

Label according Regulation (EC) 1272/2008

Pictogram



Signal Word:
DANGER

Hazard statements

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P233 Keep container tightly closed

P240 Ground and bond container and receiving equipment

P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P242 Use non-sparking tools.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard information (EU) EUH066 Repeated exposure may cause skin dryness or cracking.

Reduced Labelling (<= 125 ml)

Pictogram



Signal Word:
DANGER

Hazard statements none

Precautionary statements none

Supplemental Hazard Repeated exposure may cause skin dryness or cracking.
information (EU) EUH066

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Section 3: Composition/information on ingredients

3.1 Substance

Formula	: C_3H_6O
Molecular weight	: 58.08 g/mol
CAS-No.	: 67-64-1
EC-No.	: 200-662-2

Index-No. : 606-001-00-8

Section 4: First aid measures

4.1 Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

4.3 Indications of any immediate medical attention and special treatment needed

No data available.

Section 5: Firefighting measures

5.1 Extinguishing Media

Suitable extinguishing media

Carbon dioxide (CO₂) Foam Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given

5.2 Special hazard arising from the substance or mixture

Carbon oxides

Combustible.

Pay attention to flashback.

Vapors are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

Forms explosive mixtures with air at ambient temperatures.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

5.4 Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition.

Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environment precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®).

Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

Section 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Moisture sensitive.

Storage class

Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

Section 8: Exposure controls – Personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Derived No Effect Level (DNEL)

Application Area	Routes of exposure	Health effect	Value
Workers	Skin contact	Long-term systemic effects	186mg/kg BW/d
Consumers	Ingestion	Long-term systemic effects	62mg/kg BW/d
Consumers	Skin contact	Long-term systemic effects	62mg/kg BW/d
Workers	Inhalation	Acute systemic effects	2420 mg/m ³
Workers	Inhalation	Long-term systemic effects	1210 mg/m ³
Consumers	Inhalation	Long-term systemic effects	200 mg/m ³

Compartment	Value
Soil	33.6 mg/kg
Sea water	1.06 mg/l
Fresh water	10.6 mg/l
Sea sediment	3.04 mg/kg
Fresh water sediment	30.4 mg/kg
Onsite sewage treatment plant	100 mg/l

8.2 Exposure Controls

Personal protective equipment

Eye/face protection

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

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other
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The life science business of Merck operates as MilliporeSigma in the US and

Canada

substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: butyl-rubber

Minimum layer thickness: 0,7 mm

Break through time: 480 min

Material tested: Butoject® (KCL 898)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact

Material: Latex gloves

Minimum layer thickness: 0,6 mm

Break through time: 10 min

Material tested: Lapren® (KCL 706 / Aldrich Z677558, Size M)

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type AX

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: liquid
Color	colourless
Odor	: pungent, weakly aromatic
Melting point/freezing point	: Melting point/range: -94 °C - lit
Initial boiling point and boiling range	: 56 °C at 1.013 hPa - lit.
Flammability (solid, gas)	: No data available
Upper/lower flammability or explosive limits	: Upper explosion limit: 13 %(V) Lower explosion limit: 2 %(V)
Flash point	: -17.0 °C - closed cup
Autoignition temperature	: 465.0 °C
Decomposition temperature	: Distillable in an undecomposed state at normal pressure.
pH	: 5 - 6 at 395 g/l at 20 °C
Viscosity	: Viscosity, kinematic: No data available Viscosity, dynamic: No data available
Water solubility	: soluble, in all proportions
Partition coefficient: n-octanol/water	: No data available
Vapor pressure	: 245.3 hPa at 20.0 °C
Density	: 0,791 g/cm ³ at 25 °C - lit.
Relative density	No data available
Relative vapour density	: No data available
Particle characteristics	: No data available

Explosive properties : No data available

Oxidizing properties : none

9.2 Other safety information

Conductivity : 0.01 $\mu\text{S}/\text{cm}$ at 20 °C

Surface tension : 28.8 mN/m at 10.0 °C

Section 10: Stability and reactivity

10.1 Reactivity

Vapor/air-mixtures are explosive at intense warming.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapours with:

chromosulfuric acid

chromyl chloride

ethanolamine

Fluorine

Strong oxidizing agents

strong reducing agents

Nitric acid

chromium(VI) oxide

Risk of explosion with:

nonmetallic oxyhalides

halogen-halogen compounds

Chloroform

nitrating acid

nitrosyl compounds

hydrogen peroxide

halogen oxides

organic nitro compounds

peroxi compounds
Exothermic reaction with:
Bromine
Alkali metals
alkali hydroxides
Halogenated hydrocarbon
Sulfur dichloride
phosphorous oxichloride

10.4 Conditions to avoid

Warming.

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

Section 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - female - 5.800 mg/kg

Remarks: (ECHA)

Symptoms: Stomach/intestinal disorders, Risk of aspiration upon vomiting., Pulmonary failure possible after aspiration of vomit.

LC50 Inhalation - Rat - 4 h - 76 mg/l - vapor

Remarks: Unconsciousness

Drowsiness

Dizziness

(External MSDS)

LD50 Dermal - Rabbit - 20.000 mg/kg

Remarks: (IUCLID)

Skin corrosion/irritation

Skin - Rabbit

Result: Mild skin irritation - 24 h

(Draize Test)

Remarks: (RTECS)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Eye irritation - 24 h

(Draize Test)

Remarks: (RTECS)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative

Remarks: (ECHA)

Chronic exposure may cause dermatitis.

Germ cell mutagenicity

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Mouse lymphoma test

Metabolic activation: without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause drowsiness or dizziness. - Narcotic effects

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU)2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

RTECS: AL3150000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

After absorption:

Headache

Salivation

Nausea

Vomiting

Dizziness

narcosis

Coma

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Kidney - Irregularities - Based on Human Evidence

Skin - Dermatitis - Based on Human Evidence

Section 12: Ecological information

12.1 Toxicity

Toxicity to fish:-flow-through test LC50 - Pimephales promelas (fathead minnow) - 6.210 mg/l - 96 h
(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates:-
static test LC50 - Daphnia pulex (Water flea) - 8.800 mg/l - 48 h
Remarks: (ECHA)

Toxicity to algae:- static test NOEC - M.aeruginosa - 530 mg/l - 8 d
(DIN 38412)
Remarks: (maximum permissible toxic concentration)
(IUCLID)

Toxicity to bacteria:- static test EC50 - activated sludge - 61,15 mg/l - 30 min
(OECD Test Guideline 209)

Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity):-
flow-through test NOEC - Daphnia magna (Water flea) - 2.212 mg/l - 28 d
Remarks: (ECHA)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d
Result: 91 % - Readily biodegradable.

Biochemical Oxygen 1.850 mg/g
Demand (BOD) Remarks: (IUCLID)

Chemical Oxygen 2.070 mg/g
Demand (COD) Remarks: (IUCLID)

Theoretical oxygen 2.200 mg/g
Demand Remarks: (Lit.)

12.3 Bioaccumulated potential

Does not bioaccumulate.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

Section 13: Disposal considerations

13.1 Waste treatment methods

No data available

Section 14: Transportation information

14.1 UN Number

ADR/RID	1090
IMDG	1090
IATA	1090

14.2 UN proper shipping name

ADR/RID	ACETONE
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IMDG ACETONE

IATA ACETONE

14.3 Transport hazard class(es)

ADR/RID 3

IMDG 3

IATA 3

14.4 Packaging group

ADR/RID II

IMDG II

IATA II

14.5 Environmental hazards

ADR/RID no

IMDG no

IATA no

14.6 Special precautions for user

Tunnel restriction code (D/E)

Further information No data available

Section 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and/or restrictions on use

Regulation (EU) 2019/1148 on the marketing : acetone

and use of explosives precursors

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

P5c FLAMMABLE LIQUIDS

Other regulations

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

Section 16: Other information

Full text of H-statements

H225	Highly flammable liquid and vapor.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking.

Further information

The information and recommendations in this SDS are to the best of our knowledge, information and belief accurate at the time of publication. Although utmost care is been taken in composition of this text, Highpuris LLC cannot be held responsible for any damage resulting from any possible error in this publication.