

SPI Supplies Division

Structure Probe, Inc.

206 Garfield Ave., West Chester, PA 19380-4512 USA

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Manufacturer's CAGE: 1P573

Safety Data Sheet

Date Effective: June 26, 2018

SPI Catalog #'s 02521-AA, 02521-AB

SPI-Chem™ Acetone, Technical Grade

Section 1.1: Identification

Chemical Name/Synonyms Acetone; Dimethyl ketone; Propanone

Product or Trade Name SPI-Chem™ Acetone, Technical Grade

CAS #'s 67-64-1

Chemical Formula..... CH₃COCH₃

Section 1.2: Relevant Uses/Restrictions

Laboratory chemical used as a solvent.

This material is not being offered for clinical or diagnostic applications, agricultural uses or for human or animal consumption.

Section 1.3: Supplier of the Safety Data Sheet

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Section 1.4: Emergency telephone number

Emergencies

Contacting CHEMTREC:

24 Hour Emergency Use Only #'s...

Worldwide phone: 1-(703)-741-5970

Toll-free phone: 1-(800)-424-9300 USA + Canada only

Section 2: Hazard Identification

2.1 Classification of the substance

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

Flammable liquid (category 2)
Eye irritant (category 2A)
STOT-Single Exposure (category 3, Central Nervous System)

2.2 Label elements

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.
- P243 Take precautionary measures against static discharge.
- P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
- P280 Wear protective gloves, protective clothing/ eye protection/ face protection.
- 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.
- P312 Call a POISON CENTER/ doctor if you feel unwell.
- P403 + P325 Store in a well-ventilated place. Keep cool.

2.3 Other Hazards:

Hazards not otherwise classified (HNOC): none/ none.

Hazardous Material Information System USA (estimated)

Health 1
Fire Hazard 3
Reactivity 0
Personal Protection

NFPA Rating (estimated)

Health 1
Flammability 3
Reactivity 0

Section 3: Composition

3.1 Substances:

Substance name: Acetone

Molecular Formula: CH₃COCH₃
Molecular weight: 58.08 g/mol
CAS #: 67-64-1
EC #: 200-662-2

3.2 Mixtures: Not applicable

Section 4: First Aid Measures

4.1 Description of first aid measures:

General Information:

If exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

Inhalation:

Call a POISON CENTER/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

Skin Contact:

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

Eye Contact:

In case of contact with eyes, flush immediately with plenty of flowing water for 10 to 15 minutes, holding eyelids apart, and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion:

If accidentally swallowed, rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting. Give nothing to eat or drink.

4.2 Most important symptoms and effects, both acute and delayed:

No data available.

4.3 Indication of any immediate medical attention and special treatment needed:

No data available.

4.4 Self-protection of the first aider:

First aider: Pay attention to self-protection!

4.5 Information to physician:

No data available.

Section 5: Fire Fighting Measures

5.1 Extinguishing media:

Water spray; ABC-powder; Carbon monoxide (CO); Nitrogen

5.2 Special hazards arising from the substance or mixture:

Carbon monoxide (CO) and/or Carbon dioxide (CO₂) may be liberated in case of fire.

5.3 Hazardous combustion products: Carbon monoxide (CO) and Carbon dioxide (CO₂).

5.4 Advice for firefighters:

DO NOT fight fire when fire reaches explosives.

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional Information:

Do not allow run-off from fire-fighting to enter drains or water courses.

Do not inhale explosion and combustion gases.

Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen.

Use water spray/stream to protect personnel and to cool endangered containers.

In case of fire: Evacuate area.

Section 6: Accidental Release Measures

6.1 Personal precautions:

In case of major fire and large quantities: Remove persons to safety.

6.2 Environmental precautions:

Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up:

Spilled product must never be returned to the original container for recycling. Collect in closed and suitable containers for disposal.

Clear spills immediately.

6.4 Reference to other sections:

For disposal information, see Section 13.

Section 7: Handling and Storage

7.1 Precautions for safe handling:

Avoid inhalation.

Avoid contact with skin and eyes.

Use extractor hood (laboratory).

If handled uncovered, arrangements with local exhaust ventilation have to be used.

If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

Keep away from sources of ignition.

No smoking.

Usual measures for fire prevention.

Take precautionary measures against static discharges.

7.2 Conditions for safe storage, including any incompatibilities:

Recommended storage temperature: Ambient temperature.

Keep container tightly closed and in a well-ventilated place.

Keep/store away from combustible materials.

7.3 Specific end uses:

Laboratory chemical used as a solvent.

This material is not being offered for clinical or diagnostic applications, agricultural uses or for human or animal consumption.

Section 8: Exposure Controls and Personal Protection

8.1 Control parameter and Personal Protection:

Workplace exposure limits:

Acetone CAS # 67-64-1
NIOSH LTV: 290 mg/m³ / 250 ppm
OSHA LTV: 2400 mg/m³ / 1000 ppm

Biological limit values: No data available.

8.2 Exposure controls:

8.2.1 Appropriate engineering controls:

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

8.2.2 Individual protection measures:

Wear suitable protective clothing.

When handling with chemical substances, protective clothing must be worn.

Eye/Face Protection: Eye classes with side protection.

Skin Protection: Wear suitable gloves. When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

For short-term hand contact: Nitrile rubber/ 0.425 mm thick, 10 minutes max wearing time.

For long-term hand contact: Butyl rubber/ 0.50 mm, >480 minutes max wearing time.

Respiratory Protection: Necessary at aerosol or mist formation. If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

Additional information:

Wash hands before breaks and after work.

Avoid contact with skin and eyes.

When using, do not eat, drink, or smoke.

Provide eye shower and label its location conspicuously.

8.2.3 Environmental exposure controls:

No data available.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:

Appearance: Colorless liquid

Odor: Characteristic, pungent

Odor threshold: No data available

pH: 5-6 (400 g/l; H₂O; 20 °C)

Melting point/Freezing point: -95.4 °C

Boiling point/Boiling point range: 56.2 °C (1013 hPa)

Flash Point: <-20 °C (-4 °F) (closed cup)

Evaporation rate: No data available

Flammability (solid, gas): Highly flammable liquid and vapor.

Upper/lower flammability or explosive limits:

Lower explosion limit: 2.6 % (v/v)

Upper explosion limit: 12.8 % (v/v)

Vapor Pressure: 233 hPa (20 °C)

Vapor density: 2.01 (20 °C)

Relative density: 0.792 g/cm³ (20 °C)

Solubility in water: Soluble (20 °C)

Partition coefficient (n-octanol/water): -0.24 (20 °C)

Auto-ignition temperature: 465 °C (869 °F) (DIN 51794)

Decomposition temperature: No data available.

Viscosity:

Kinematic viscosity: No data available

Dynamic viscosity: 0.32 mPa·s (20 °C)

Explosive properties: Not applicable

Oxidizing Properties: Not applicable

9.2 Other information:

Bulk density: Not applicable

Refraction index: 1.3591 (589 nm; 20 °C)

Dissociation constant: No data available

Surface tension: No data available

Henry constant: No data available

Section 10: Stability and Reactivity

10.1 Reactivity:

Vapors are heavier than air, spread along floors, and form explosive mixtures with air.

10.2 Chemical Stability:

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

10.3 Possibility of Hazardous Reactions:

Formation of explosive mixtures with:

Oxidizing agent, strong

Reducing agent, strong

Nitric acid

Trichloromethane

Peroxide

Violent reaction with:

Alkali (lye)

Oxidizing agent

Reducing agent

Exothermic reactions with:

Bromine

Chlorine

10.4 Conditions to avoid:

UV-radiation / sunlight

Heat

This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition, such as static electricity, pilot lights, or mechanical/electrical equipment.

10.5 Incompatible materials:

Rubber articles
Plastic articles

10.6 Hazardous decomposition products:

No data available.

10.7 Additional information:

No data available.

Section 11: Toxicological Information

Information on the likely routes of exposure:

11.1 Information on toxicological effects:

A. Acute toxicity:

Acute oral toxicity:

LD50:>5800 mg/kg – Rat (RTECS)

Acute dermal toxicity:

LD50:>20,000 mg/kg – Rabbit (IUCLID)

Acute inhalation toxicity:

LC50:>76 mg/l (4h) – Rat

B. Skin or Respiratory corrosion/irritation:

Primary irritation to the skin: Not applicable.

Irritation to respiratory tract: Not applicable.

C. Serious eye damage/irritation:

Causes serious eye irritation.

D. Respiratory or skin sensitization:

In case of skin contact: Not sensitizing.

After inhalation: Not sensitizing.

E. Germ cell mutagenicity:

No indications of human germ cell mutagenicity exist.

F. Carcinogenicity:

There is no data available indicating carcinogenicity from the ACGIH, IARC, NTP, or OSHA.

G. Reproductive toxicity:

No indications of human reproductive toxicity exist.

H. STOT-single exposure:

Ma7y cause drowsiness or dizziness.

I.. STOT-repeated exposure: Not applicable.

J. Aspiration hazard: Not applicable.

Section 12: Ecological Information

12.1 Toxicity:

Fish toxicity:

LC50: 8300 mg/l (96h) –Cairns, J.Jr., and A. Scheier 1968 A Comparison of the Toxicity of Some Common Industrial Waste Components Tested Individually and Combined. Prog.Fish-Cult. 30(1):3-8.

Daphnia toxicity:

EC50: 18500 mg/l (48h) – Randall, T.L., and P.V. Knopp 1980. Detoxification of Specific Organic Substances by Wet Oxidation. J.Water Pollut.Control Fed. 52(8):2117-2130.

LC50: 8450 mg/l (48h) – Cowgill, U.M., and D.P. Milazzo 1991. The Sensitivity of Ceriodaphnia dubai and Daphnia magna to Seven Chemicals Utilizing the Three-rood Test. Arch.Environ.Contam.Toxicol. 20(2):211-217.

Algae toxicity:

EC50: 7200 mg/l (96 h) – Slooff, W. 1982. A Comparative Study on the Short-Term Effects of 15 Chemicals on Fresh Water Organisms of Different Tropic levels. Natl.Tech.Inf.Serv., Springfield, VA: 25 p. (DUT) (EMG ABS) (NTIS/PB83-200386).

Bacteria toxicity: No data available.

12.2 Persistence and degradability: No data available.

12.3 Bio-accumulative potential: Partition coefficient: n-octanol/water: -0.24 (20 °C)

12.4 Mobility in soil: No data available.

12.5 Results of PBT and vPvB assessment: No data available.

12.6 Other adverse effects: No data available.

Section 13: Disposal Considerations

13.1 Waste treatment methods:

Appropriate disposal / Product:

Waste code product: 070104.

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal.

Appropriate disposal / Package:

Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

Additional information: No data available.

Section 14: Transport Information

DOT:

| | |
|----------------------------------|---------|
| 14.1 UN number: | UN1090 |
| 14.2 UN proper shipping name: | Acetone |
| 14.3 Transport hazard class(es): | 3 |
| 14.4 Hazard label: | 3 |
| 14.5 Packing Group: | II |
| 14.6 Environmental hazards: | No |

14.7 Marine pollutant: No
14.7 Special precautions for user: No data available.

IATA:

UN number: UN1090
UN proper shipping name: ACETONE
Transport hazard class(es): 3
Classification code:
Hazard label: 3
Packing Group: II
Special precautions for user: No data available.

IMDG:

UN number: UN1090
UN proper shipping name: ACETONE
Transport hazard class(es): 3
Classification code:
Hazard label: 3
Packing Group: II
Environmental hazards: No
MARINE POLLUTANT: No data available.
Special precautions for user: No data available.
Segregation group:
EmS-No.: F-E S-D
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: not relevant

Section 15: Regulatory Information

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

Acetone, CAS# 67-64-1, is listed on the following International Inventories:

TSCA
DSL
EINECS 200-662-2
PICCS
ENCS
AICS
IECSC
KECL

U.S. Government Regulations:

TSCA 12b: Not applicable

SARA 311/312:
Fire Hazard; Acute Health Hazard; Chronic Health Hazard

SARA 313: Not applicable.

Clean Water Act: Not applicable

Clean Air Act: Not applicable

State Right-to-Know Lists:

Acetone, CAS# 67-64-1, is listed on the Massachusetts, Pennsylvania, New Jersey, and Rhode Island Right-to-Know Lists.

California Prop. 65: Acetone, CAS # 67-64-1, is not listed.

15.2 Chemical Safety Assessment:

Date of Preparation: 26 June 2018.

Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
CMRG: Chemical Manufacturer's Recommended Guidelines
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
AIHA: American Industrial Hygiene Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bio-accumulative and Toxicological
vPvB: very Persistent and very Bio-accumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety Health
ATE: Acute Toxicity Estimates
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
STEL: Short Term Exposure Limit
CEIL: Ceiling
TSCA: Toxic Substances Control Act (USA)
DSL: Domestic Substances List (Canada)
PICCS: Philippine Inventory of Chemicals and Chemical Substances
ENCS: Existing and New Chemical Substances (Japan)
AICS: Australian Inventory of Chemical Substances
IECSC: Inventory of Existing Chemical Substances in China
KECL: Korea Existing Chemicals List

Section 16: Other Information

Disclaimer of Liability:

Caution! Do not use SPI Supplies products or materials in applications involving implantation within the body; direct or indirect contact with the blood pathway; contact with bone, tissue, tissue fluid, or blood; or prolonged contact with mucous membranes. Products offered by SPI Supplies are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. SPI Supplies will not provide to customers making devices for such applications any notice, certification, or information necessary for such medical device use required by US FDA (Food and Drug Administration) regulation or any other statute. SPI Supplies and Structure Probe, Inc. make no representation, promise, express warranty or implied warranty concerning the suitability of these materials for use in implantation in the human body or in contact with internal body tissues of fluids.

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