

SPI Supplies Division

Structure Probe, Inc.

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Manufacturer's CAGE: 1P573

Safety Data Sheet

Date Effective: April 29, 2015

SPI# 02521-AA, 02521-AB
SPI-Chem™ Acetone, Technical Grade

Section 1: Identification

Chemical Name/Synonyms..... Acetone

Chemical family..... ketone

Emergencies

Contacting CHEMTREC:

24 Hour Emergency Use Only #'s...

Worldwide phone: 1-(703)-527-3887

Worldwide FAX: 1-(703)-741-6090

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

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

CAS #'s..... 67-64-1

Chemical Formula..... CH₃COCH₃

HAZARDOUS CLASSIFICATION

GHS Classification in accordance with 20 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2)

Eye irritation (Category 2A)

Specific target organ toxicity – single exposure (Category 3), Central nervous system

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/ 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

Hazardous Material Information System USA

Health..... 1
Fire Hazard..... 3
Reactivity..... 0
Personal Protection.....

NFPA Rating (estimated)

Health..... 1
Flammability..... 3
Reactivity..... 0

Section 2: Composition

Acetone CAS# 67-64-1 > 99% EC Number: 200-662-2

Section 3: Hazard Identification

Clear, colorless liquid.
Flash Point: -4 F°. Extremely flammable liquid and vapor.

Potential health effects (acute and chronic): Causes Eye Irritation. Causes respiratory tract irritation. Breathing vapors may cause drowsiness and dizziness. Prolonged or repeated contact may dry the skin and cause irritation of the skin.

Target Organs: central nervous system, respiratory system, eyes, skin.

Symptoms of exposure:

Effects of eye exposure: Causes eye irritation. May cause burning sensation, redness, tearing, inflammation, and possible corneal damage.

Effects of skin contact: Prolonged and/or repeated contact may cause drying or cracking of the skin. May be absorbed through the skin.

Effects of ingestion: May cause gastrointestinal irritation. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

Effects of inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause motor incoordination and speech abnormalities.

Chronic Effects: Prolonged or repeated skin contact may cause dermatitis. Chronic inhalation may cause central nervous system effects, respiratory tract irritation and/or motor incoordination and speech abnormalities.

Section 4: First Aid Measures

Eyes: Immediately flush thoroughly with water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Skin: Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water for at least 15 minutes, while removing contaminated clothing and shoes. Wash clothing thoroughly before reusing.

Inhalation: Get medical aid immediately. Remove to fresh air immediately. Give artificial respiration if breathing has stopped. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased, apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Ingestion: Do NOT induce vomiting. If conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Notes to Physician: Treat symptomatically and supportively.

Section 5: Fire Fighting Measures

Flash Point..... -4 F°

Autoignition Temperature: . . . 869 F°

Explosion Limits:

Lower . . 2.5%

Upper . . 12.8%

Fire Extinguishing Media:

For small fires use dry chemical, CO₂, water spray, or "alcohol" foam.

For large fires use water spray, fog or alcohol-resistant foam. Water may be ineffective. Do NOT use straight streams of water. Cool containers with flooding quantities of water until well after fire is out.

Firefighting Procedure:

Wear self-contained breathing apparatus in pressure-demand, MSHA/NIOSH approved or equivalent, full protective gear. During a fire containers can build up pressure if exposed to heat or flame. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or thermal combustion. May be ignited by heat, sparks, or flame. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.

Section 6: Accidental Release Measures

Spill Response:

General Information: Wear suitable protective equipment listed under exposure/personal protection, including self contained breathing apparatus.

Spills/Leaks:

Avoid runoff into storm sewers and ditches which lead to waterways. Avoid all sources of ignition. Provide ventilation. Absorb spill with an absorbent, non-combustible material such as earth, sand or vermiculite and place in suitable container for proper disposal, using a spark-proof tool. A vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

Section 7: Handling and Storage

Handling:

Use only in a well-ventilated area. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with heat, sparks and flame. Empty containers may contain residue - do not pressurize, or expose empty containers to heat, sparks or open flames. Keep tightly closed. Avoid ingestion or inhalation.

Storage:

Keep away from sources of ignition. Keep away from heat, sparks, and flame. Store in a tightly closed container. Store in a flammables area, away from incompatible materials. Store in cool, dry, well ventilated area.

Section 8: Exposure Controls and Personal Protection

An eyewash facility and a safety shower should be available. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Airborne Exposure Limits:

<u>Chemical Name</u>	<u>ACGIH</u>	<u>NIOSH</u>	<u>OSHA - Final PEL</u>
Acetone	500 ppm TWA 750 ppm STEL 2500 ppm IDHL	250 ppm TWA 590 mg/m ³ TWA	1000 ppm TWA 2000 mg/m ³ TWA

OSHA Vacated PELs:

Acetone: 750 ppm TWA; 1800 mg/m³ TWA; 1000ppm STEL; 2400 mg/m³ = STEL

Personal Protective Equipment:

Eyes: Wear chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or the European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in **29CFR 1910.134** or the European Standard EN149. Always use a NIOSH or European Standard approved respirator when necessary.

Section 9: Physical and Chemical Properties

Boiling Point.(760mm Hg). 133.2°F
Formula Weight..(g/mol).. 58
pH (Liquids Only)..... 7
Melting Point..... -139.6°C
Vapor Pressure.(mm Hg)... 189
Vapor Density/Air is 1... 2.0
Solubility In Water..... soluble
Appearance and Color..... colorless
Specific Gravity(H₂O=1): 0.79
Evaporation Rate 7.7 (in N-Butyl acetate)
Odor..... sweet smell
Molecular Formula..... CH₃COCH₃

Section 10: Stability and Reactivity

Stable: Stable at room temperature in closed containers under normal storage and handling conditions.

Hazardous Polymerization: Has not been reported.

Hazardous Decomposition Products: COx (Carbon Dioxide / Carbon Monoxide), irritating and toxic fumes and gases

Conditions to avoid: High temperatures, ignition sources

Materials to avoid: Strong oxidizing agents; Strong acids.

Section 11: Toxicological Information

RTECS #: CAS# 67-64-1: AL3150000

Toxicity data: CAS# 67-64-11
Draize test, Rabbit, eye: 20mg Severe
Draize test, Rabbit, eye: 20mg/24H Mod.
Draize test, Rabbit, skin: 500mg/24H Mild
Inhalation, Mouse LC50: 44gm/m³/4H
Inhalation, rat LC50: 50100mg/m³/8H
Oral, Mouse LD50: 3 gm/kg
Oral, Rabbit LD50: 5340 mg/kg
Oral, rat LD50: 5800 mg/kg
Dermal, guinea pig LD50: >9400uL/kg
Carcinogenicity:
CAS# 67-64-1: A4 - Not listed by ACGIH or IARC

Epidemiology: No information available

Teratogenicity: No information available

Reproductive effect:

67-64-1: Reproductive - Paternal Effects - spermatogenesis,
including genetic material, sperm morphology, motility and count.

Neurotoxicity: No information available

Mutagenicity:

67-64-1: Sex chromosome loss and non disjunction
(Yeast-Saccharomyces cerevisiae)= 47600 ppm;
Cytogenetic analysis (Rodent-hamster Fibroblast)= 40 gm/L

Section 12: Ecological Information

Ecotoxicity:

Fish:

Fathead Minnow LC50 7280-8120 mg/L

Bluegill LC50 8300 mg/L

Environmental:

Terrestrial: Volatilizes, leaches, and biodegrades when released in soil.

Section 13: Disposal Considerations

Consult state and local hazardous waste regulations to ensure complete and accurate classification.

US EPA guidelines for hazard classification determination are listed in 40 CFR Parts 261.3.

RCRA P-Series: None listed

RCRA U-Series: CAS# 67-64-1: waste number U002 (Ignitable Waste)

Section 14: Transport Information

	US DOT	CAN.TDG
Shipping Name	Acetone	Acetone
Hazard Class	3	3
UN Number	UN1090	UN1090
Packing Group	II	II
Flash Point: -20 C		

Section 15: Regulatory Information

TSCA

CAS# 67-64-1 is listed on the TSCA inventory.

Health & Safety Reporting List

Not listed

Chemical Test Rules

Not listed

Section 12b

CAS# 67-64-1: 4/12b

TSCA Significant New Use Rule

Not listed on SNUR under TSCA.

SARA

Section 302 (RQ)

CAS# 67-64-1: final RQ = 5000 pounds (2270 kg)

Section 302 (TPQ)

Not listed

SARA Codes

CAS# 67-64-1: acute, chronic, flammable

Section 313

Not listed

Clean Air Act:

Not listed

Clean Water Act:

Not listed

OSHA:

Not listed as highly hazardous by OSHA.

STATE:

CAS# 67-64-1 can be found on the following state right to know lists:
California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

European/International Regulations

Hazard Symbols:

CAS# 67-64-1: XI F

Risk Phrases:

R11 Highly flammable
R36 Irritating to eyes
R 66 Repeated exposure may cause skin dryness or cracking
R 67 Vapors may cause drowsiness and dizziness

Safety Phrases:

S9 Keep container in a well-ventilated place
S16 Keep away from sources of ignition - No smoking
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

WGK (Water Danger/Protection)

67-64-1:1

Canada - DSL/NDSL

Is listed on Canada's DSL list.

Canada - WHMIS

Has WHMIS classification of B2, D2B

Canada Ingredient Disclosure List

Is listed on the Canadian Ingredient Disclosure List.

Exposure Limits Around the World

TWA for:	Acetone
Australia	500 ppm
Belgium	750 ppm
Czechoslovakia	800 mg/m ³
Denmark	250 ppm
Finland	500 ppm
France	750 ppm
Germany	1000 ppm
Hungary	600 mg/m ³
Japan	200 ppm
The Netherlands	750 ppm
The Philippines	1000 ppm
Poland	200 mg/m ³
Russia	200 ppm
Sweden	250ppm
Switzerland	750 ppm
Turkey	1000 ppm
United Kingdom	750 ppm

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 or fluids.

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