



SAFETYDATASHEET

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Acetone, 99%, Tech

Product number(s): 5017000, 5017500 5018000, 5019000

1.2 Details of the supplier of the safety datasheet

Shape Products

1127 57th Avenue

Oakland, CA 94621

USA

Telephone: +1 510-534-1186

Fax: +1 510-534-1862

1.3 Emergency telephone number

For domestic U.S.A. - Chemtrec: +1 800-424-9300, contract # 23969

For international - Infotec: +1 352-323-3500, contract # 107082

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29CFR1910 (OSHAHCS)

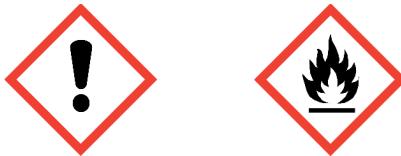
Flammable liquids Category 2

Serious eye damage/eye irritation Category 2A

Specific target organ toxicity, single exposure Category 3 narcotic effects

2.2 GHS Label elements, including precautionary statements

Pictogram(s)



Signal word **Danger**

Hazard statement(s)

Highly flammable liquid and vapor. Causes serious eye irritation. May cause drowsiness or dizziness.

Precautionary statements(s)

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing mist/vapors. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. In case of fire: Use alcohol-resistant foam, carbon dioxide, dry powder or water fog for extinction. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1

Name	CAS number	%	GHS-US classification
Acetone	67-64-1	100	Flam. Liq. 2, H225; Eye Irrit. 2A, H319, STOT SE 3, H336

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Notes to Physician: Treatment based on sound judgment of physician and individual reactions of patient. Aspiration into the lungs will result in chemical pneumonitis.

If inhaled

Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention

In case of skin contact

In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.

In case of eye contact

Flush eyes with water for at least 15 minutes while holding eyelids open. Obtain medical attention.

If swallowed

Do not induce vomiting. Guard against aspiration into lungs by having the individual turn on to their left side. Do not give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Seek immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Eye Contact: Vapors are irritating to eyes. Contact with solution may cause moderate to severe eye irritation. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.

Skin Contact: Prolonged or repeated contact may cause defatting and drying of the skin. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance.

Inhalation: Vapors are moderately irritating to the respiratory passages. Inhalation of high vapor concentrations may cause central nervous system depression resulting in dizziness, light headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death.

Ingestion: Ingestion of this product would cause headache, dizziness, fatigue and central nervous system depression. May cause lung damage if swallowed. If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath and or fever.

4.3 Indication of any immediate medical attention and special treatment needed

No additional information available

5. FIREFIGHTING MEASURES

5.1 Suitable extinguishing media

Use DRY chemicals, CO₂, alcohol foam or water spray

5.2 Special hazards arising from the substance or mixture

Hazards

Extremely flammable. Do not enter confined fire space without adequate protective clothing and an approved positive pressure self-contained breathing apparatus. Vapor forms a flammable / explosive mixture with air between upper and lower flammable limits. Vapors may travel along ground and flashback along vapor trail may occur. Fight fire from maximum distance. This material may produce a floating fire hazard. Do not use water except as a fog.

Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure build-up which could result in container rupture. Always stay away from ends of containers due to explosive potential.

Acetone/water solutions that contain more than 2.5% acetone have flash points. When the acetone concentration is greater than 8% (by weight) in a closed container, it would be within the flammable range and cause fire or explosion if a source of ignition were introduced.

5.3 Advice for firefighters

Equipment

Fire fighters should wear full protective clothing, including self-contained breathing equipment.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear appropriate protective equipment.

6.2 Environmental precautions

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Consult local authorities.

6.3 Methods and materials for containment and cleaning up

Flammable liquid. Eliminate all ignition sources. Isolate spill and stop leak where safe. Try to work upwind of spill. Avoid direct contact with material. Saturated clothing should be immediately removed to avoid flammability hazard. Wear appropriate breathing apparatus (if applicable) and protective clothing. Dike and contain land spills; contain water spills by booming. Use water fog to knock down vapors; contain runoff. For large spills, remove by mechanical means and place in appropriate containers for disposal. For small spills, collect with non-combustible absorbent. Flush area with water to remove trace residue.

6.4 Reference to other sections

No additional information available

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Flammable. Do not cut, drill, grind, weld or perform similar operations on or near containers. Vapors may accumulate and travel to distant ignition sources and flashback. Empty containers may contain hazardous product residues. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. Hot surfaces may be sufficient to ignite liquid even in the absence of sparks or flames. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors are gone. Do not pressurize drum containers to empty them. Avoid breathing vapors and prolonged or repeated contact with skin. Launder contaminated clothing prior to reuse.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area, away from heat and ignition sources. Bulk storage tanks should be diked. Vapors from tanks should not be released to atmosphere. Use explosion-proof ventilation to prevent vapor accumulation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid). Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end user(s)

No additional information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameter

Components with workplace control parameters

Component	CAS-No.	Control parameters	Value
Acetone	67-64-1	ACGIH STEL / TWA	750 ppm / 500 ppm
		OSHA TWA	750 ppm / 1800 mg/m ³
		OSHA PEL	2400 mg/m ³ / 1000 ppm

8.2 Exposure controls

Appropriate Engineering controls

Mechanical ventilation is recommended for all indoor situations to control fugitive emissions. Electrical and mechanical equipment should be explosion proof. Concentrations in air should be maintained below lower explosive limit at all times or below the recommended threshold limit value if unprotected personnel are involved. Make up air should always be supplied to balance air exhausted (either generally or locally). For personnel entry into confined spaces (i.e. bulk storage tanks) a proper confined space entry procedure must be followed including ventilation and testing of tank atmosphere. Local ventilation recommended where mechanical ventilation is ineffective in controlling airborne concentrations below the recommended occupational exposure limit.

Personal protective equipment

Eye/face protection

Chemical safety goggles and/or full face shield to protect eyes and face, if product is handled such that it could be splashed into eyes.

Skin and Hand protection

Appropriate chemical resistant gloves should be worn. Butyl rubber gloves. Ethyl Vinyl Alcohol Laminate (EVAL)

Body protection

In confined spaces or where the risk of skin exposure is much higher, impervious clothing should be worn.

Respiratory protection

If exposure exceeds occupational exposure limits, use an appropriate NIOSH-approved respirator. Use a NIOSH-approved chemical cartridge respirator with organic vapor cartridges or use a NIOSH-approved supplied-air respirator. For high airborne concentrations, use a NIOSH -approved supplied-air respirator, either self-contained or airline breathing apparatus, operated in positive pressure mode.

Other information

Ensure that eyewash stations and safety showers are proximal to the work-station location.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Physical state:	Liquid
Color	colorless
Upper/lower flammability or explosive limits	Lower: 2.6% Upper: 12.6%
Odor	Pungent Fruity. Characteristic.
Odor threshold	No data available
Vapor pressure	>181 mm Hg @ 20°C
Vapor density	2.0
pH	7
Relative density	0.79 @ 20 C
Melting point	-95 C
Freezing point	-137°F
Initial Boiling point and boiling range	56.5 C
Flash point	-18 °C / 0 °F
Evaporation rate	11.6
Flammability (solid, gas)	No data available
Water solubility	Completely soluble.
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	465°C /869°F
Decomposition temperature	No data available
Viscosity	Dynamic: 0.32 mPa.s (0.32 centipoises) at 20°C

10. STABILITY AND REACTIVITY**10.1 Reactivity**

Thermal decomposition generates : Corrosive vapours.

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

Will not occur

10.4 Conditions to avoid

Avoid excessive heat, open flames and all ignition sources. Direct sunlight.

10.5 Incompatible materials

Strong acids and bases. Strong oxidizers. Peroxides. Reducing agents. Aldehydes. Ammonia. Chlorine compounds. Acetone may form explosive mixtures with chromic anhydride, chromyl alcohol, hexachloromelamine, hydrogen peroxide, permonosulfuric acid, potassium tertbutoxide, and thioglycol.

10.6 Hazardous decomposition products

Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Acute Oral LD50: Not Available.

Acute Dermal LD50: Not Available.

Acute Inhalation LC50: Not Available.

Ingestion toxicity

Ingestion of this product would cause headache, dizziness, fatigue and central nervous system depression. May cause lung damage if swallowed. If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath and/or fever

Skin corrosion/irritation

Prolonged or repeated contact may cause defatting and drying of the skin. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance.

Serious eye damage/eye irritation

Vapors are irritating to eyes. Contact with solution may cause moderate to severe eye irritation. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.

Respiratory or skin sensitization

Vapors are moderately irritating to the respiratory passages. Inhalation of high vapor concentrations may cause central nervous system depression resulting in dizziness, light headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death.

Germ cell mutagenicity

Negative mutagenicity results have been obtained in tests using cultured mammalian cells and bacteria

Carcinogenicity

Acetone

IARC - Carcinogens: Not listed

ACGIH - Carcinogens: A4

Reproductive toxicity

No effects on fertility have been observed.

Specific target organ toxicity – single exposure

No data available

Specific target organ toxicity – repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

Acute skin contact with Acetone is either slightly irritating or not irritating, based on animal and limited human information. Prolonged or repeated contact may cause defatting of the skin and produce dermatitis (dryness, irritation, redness and cracking). Eye contact with vapor or liquid may cause mild - severe irritation and may cause corneal injury. Depending on the concentration, the effects of inhalation may be: irritation of the nose and throat, headaches, light-headedness and tiredness, dizziness, drunkenness, drowsiness, nausea and vomiting. Unconsciousness may result if exposure is extremely high (greater than 10000 ppm). Intolerable nose and throat irritation would also occur at these concentrations. Even higher concentrations can cause collapse, coma and death. Tolerance to the effects of acetone can develop. No effects or minor effects (slight drowsiness) are expected with ingestion. If acetone is aspirated (breathed into the lungs during ingestion or vomiting) it can cause severe, life-threatening lung injury. Animal information suggests that acetone would be difficult to aspirate because it evaporates so quickly. Based on its physical properties, acetone can be aspirated into the lungs during ingestion or vomiting. Acetone has increased the liver toxicity of chemicals, such as carbon tetrachloride, chloroform, trichloroethylene, bromodichloromethane, dibromochloromethane, N-nitrosodimethylamine and 1,1,2-trichloroethane, the lung toxicity of styrene and the toxicity of acetonitrile and 2,5- hexanedione in laboratory animals. It appears to inhibit the metabolism and elimination of ethyl alcohol, thereby potentially increasing its toxicity. Acetone can either increase or decrease the toxicity of 1,2-dichlorobenzene, depending on the concentration of acetone used.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Exotoxicity

Fish Species Data - Acetone

4.74 - 6.33 mL/L LC50 (Oncorhynchus mykiss) 96 h

6210 - 8120 mg/L LC50 (Pimephales promelas) 96 h static

8300 mg/L LC50 (Lepomis macrochirus) 96 h

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results in PBT and vPvB assessment

No data available

12.6 Other adverse effects

Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams or public waterways. Block off drains and ditches. Spill areas must be cleaned and restored to original condition or to the satisfaction of authorities. May be harmful to aquatic life. Biodegrades (slow). Rapid volatilization. Not expected to bioconcentrate.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.

Contaminated Container

Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleared drums. Empty containers should be recycled or disposed of through an approved waste management facility.

14. TRANSPORT INFORMATION

In accordance with DOT

DOT NA No.	UN1090
DOT Proper Shipping Name	Acetone
Hazardous Class	3
Packing group (DOT)	II
Reportable Quantity (RQ)	5000#

Hazard Labels:



15. REGULATORY INFORMATION

US Federal regulations

Acetone CERCLA/SARA - Section 302:Not Listed. SARA (311, 312) Hazard Class:Listed. CERCLA/SARA - Section 313:Not Listed.

International regulations

Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

US State regulations

California Proposition 65: Not Listed.

MA Right to Know List: Listed.

New Jersey Right-to-Know List: Listed.

Pennsylvania Right to Know List: Listed.

TSCA Inventory List:

All of the ingredients (or their hydrate forms) are listed.

CERCLA Reportable Quantity (RQ):

CAS# 67-64-1: 5000 lb.

SARA Section 302 Threshold Planning Quality (TPQ):

None of the ingredients have a TPQ.

SARA Title Codes:

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

OSHA:

This product is not considered to be highly hazardous by OSHA Hazard Communication Standard.

16. OTHER INFORMATION

HMIS Rating

HEALTH: 1

FIRE: 3

REACTIVITY: 0

SPECIFIC HAZARD: N/A

Further Information

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Preparation Information

Current Revision: 2

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