

# SAFETY DATA SHEET

## 1. Identification of the substance or mixture and of the supplier

**Product identifier:** Acetone

**Other means of identification**

**Synonyms:** 2-Propanone  
**Product No.:** 2432, 2435, 2437, 2440, 2443, 2462, 2570, 2572, 5008, 5018, 5276, 5356, 5580, 5965, 5975, 9002, 9003, 9005, 9006, 9008, 9009, 9010, 9015, 9036, 9254, 9271, 9422, 9910, A134, H451, H580

**Recommended use and restriction on use**

**Recommended use:** For Laboratory, Research or Manufacturing Use.  
**Restrictions on use:** Not determined.

**Details of the supplier of the safety data sheet**

Company Name:	Avantor Performance Materials, LLC
Address:	100 Matsonford Rd, Suite 200 Radnor, PA 19087
Telephone:	021-58783226
Fax:	
Contact Person:	Product Information Compliance
E-mail:	info@avantormaterials.com

**Emergency telephone number:** CHEMTREC: 4001-204937

## 2. Hazard(s) identification

<b>Emergency Overview</b>	
<b>Appearance</b>	
<b>Color:</b>	Colorless

<b>Form:</b>	Liquid
<b>Physical state:</b>	Liquid
<b>Odor:</b>	Sweet, mint-like
<b>Signal Word:</b>	DANGER!
<b>Potential Health Effects:</b>	Highly flammable liquid and vapor. Causes serious eye irritation. May cause drowsiness or dizziness. May be harmful if swallowed and enters airways.
<b>Potential Physical / Chemical Effects:</b>	Flammable liquid and vapor.

**Physical Hazards**

Flammable liquids Category 2

**Health Hazards**

Serious Eye Damage/Eye Irritation Category 2A  
Specific Target Organ Toxicity - Single Exposure Category 3<sup>1</sup>  
Aspiration Hazard Category 2

**Target Organs**

- Narcotic effect.

**Hazard symbol(s):**



**Signal Word:** Danger

**Hazard statements:** Highly flammable liquid and vapor.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.  
May be harmful if swallowed and enters airways.

**Precautionary statement(s):**

**Prevention:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Use explosion-proof [electrical/ventilating/lighting] equipment. Ground and bond container and receiving equipment. Use non-sparking tools. Take action to prevent static discharges. Wash thoroughly after handling. Avoid breathing dust/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

**Response:** In case of fire: Use water spray, foam, dry powder or carbon dioxide for extinction. IF ON SKIN (or hair): Take off immediately all contaminated

clothing. Rinse skin with water [or shower]. 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. IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting.

**Storage:** Store in a well-ventilated place. Keep cool. Store locked up.

**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in GHS classification:** None.

### 3. Composition/information on ingredients

#### Substances

Chemical Identity	CAS number	Content in percent (%)*
Acetone	67-64-1	99.00 - 100.00%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 4. First-aid measures

**General information:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

#### Description of necessary first-aid measures

**Inhalation:** Move to fresh air. Get medical attention if symptoms persist.

**Skin Contact:** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

**Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation persists after washing.

**Ingestion:** Call a physician or poison control center immediately. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

**Personal Protection for First-aid Responders:** No data available.

**Most important symptoms/effects, acute and delayed**

**Symptoms:** Narcotic effect.

**Hazards:** No data available.

**Notes to physician**

**Treatment:** Symptoms may be delayed. Treat symptomatically.

<b>5. Fire-fighting measures</b>
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**General Fire Hazards:** Flammable liquid and vapor.

**Means of fire extinguishing**

**Suitable extinguishing media:** Water spray, foam, dry powder or carbon dioxide.

**Unsuitable extinguishing media:** Avoid water in straight hose stream; will scatter and spread fire.

**Specific hazards arising from the chemical:**

Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations. Heat may cause the containers to explode.

**Special protective equipment and precautions for firefighters**

**Special fire fighting procedures:** Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

<b>6. Accidental release measures</b>
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**Personal precautions, protective equipment and emergency procedures:**

See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away. Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind.

**Environmental Precautions:**

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

**Methods and material for containment and cleaning up:** In case of leakage, eliminate all ignition sources. Take precautionary measures against static discharges. Stop leak if possible without any risk. Use non-sparking tools. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

**Notification Procedures:** Inform authorities if large amounts are involved.

## 7. Handling and storage

**Precautions for safe handling:** DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Ground and bond container and receiving equipment. Use personal protective equipment as required. Do not get in eyes, on skin, on clothing. Use only with adequate ventilation. Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

**Conditions for safe storage, including any incompatibilities:** Keep away from food, drink and animal feeding stuffs. Keep container tightly closed in a cool, well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

## 8. Exposure controls/personal protection

### Control Parameters

#### Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Acetone	PC-STEL	450 mg/m <sup>3</sup>	China. OELs (Occupational Exposure Limits for Hazardous Agents in the Workplace) (GBZ 2.1) (03 2008)
	PC-TWA	300 mg/m <sup>3</sup>	China. OELs (Occupational Exposure Limits for Hazardous Agents in the Workplace) (GBZ 2.1) (03 2008)

#### Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Acetone (acetone: Sampling time: End of shift.)	25 mg/l (Urine)	ACGIH BEI (03 2015)

**Appropriate Engineering Controls:** No data available.

### Individual protection measures, such as personal protective equipment

<b>General information:</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.
<b>Eye/face protection:</b>	Wear safety glasses with side shields (or goggles) and a face shield.
<b>Skin Protection</b>	
<b>Hand Protection:</b>	Chemical resistant gloves
<b>Other:</b>	Wear suitable protective clothing and gloves.
<b>Respiratory Protection:</b>	In case of inadequate ventilation use suitable respirator. Chemical respirator with organic vapor cartridge.
<b>Hygiene measures:</b>	Provide eyewash station and safety shower. Observe good industrial hygiene practices. Do not eat, drink or smoke when using the product. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Do not get this material in contact with skin. Avoid contact with eyes. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

## 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	Liquid
<b>Form:</b>	Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Sweet, mint-like
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	5 - 6 (20 °C)
<b>Melting point/freezing point:</b>	-94.8 - 94.6 °C
<b>Initial boiling point and boiling range:</b>	56 °C (101.3 kPa)
<b>Flash Point:</b>	-20 - -17 °C (Closed Cup)
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	Class IB Flammable Liquid
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	12.8 %(V)
<b>Flammability limit - lower (%):</b>	2.13 - 2.6 %(V)
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	233 - 240 hPa (20 °C) 309 hPa (25 °C) 530 - 560 hPa (40 °C)
<b>Vapor density:</b>	2

<b>Density:</b>	0.79 g/ml (20 °C)
<b>Relative density:</b>	0.80 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Miscible
<b>Solubility (other):</b>	Alcohol: Miscible benzene: Soluble chloroform: Miscible dimethylformamide: Miscible ether: Miscible
<b>Partition coefficient (n-octanol/water):</b>	-0.24
<b>Auto-ignition temperature:</b>	465 °C
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.

#### Other information

<b>Liquid conductivity:</b>	0.6 µS/cm (25 °C)
<b>Minimum ignition energy:</b>	1.15 mJ
<b>Molecular weight:</b>	58.08 g/mol ((CH <sub>3</sub> ) <sub>2</sub> CO)

### 10. Stability and reactivity

<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid:</b>	Heat, sparks, flames. Contact with incompatible materials.
<b>Incompatible Materials:</b>	Strong acids. Strong oxidizing agents.
<b>Hazardous Decomposition Products:</b>	Thermal decomposition may release oxides of carbon.
<b>Other information:</b>	No data available.

### 11. Toxicological information

#### Information on likely routes of exposure

<b>Inhalation:</b>	May cause irritation to the respiratory system.
<b>Skin Contact:</b>	Prolonged skin contact may cause temporary irritation.
<b>Eye contact:</b>	Causes serious eye irritation.
<b>Ingestion:</b>	May cause irritation of the gastrointestinal tract.

## Information on toxicological effects

### Acute toxicity (list all possible routes of exposure)

#### Oral

**Product:** LD 50 (Rat): 5,800 mg/kg

#### Dermal

**Product:** LD 50 (Rabbit): 20,000 mg/kg

#### Inhalation

**Product:** LC 50 (Rat): 50.1 - 76 mg/l

### Repeated dose toxicity

**Product:** No data available.

### Skin Corrosion/Irritation

**Product:** Prolonged skin contact may cause temporary irritation.

### Serious Eye Damage/Eye Irritation

**Product:** Causes serious eye irritation.

### Respiratory or Skin Sensitization

**Product:** Not a skin nor a respiratory sensitizer.

### Carcinogenicity

**Product:** This substance has no evidence of carcinogenic properties.

### Germ Cell Mutagenicity

#### In vitro

**Product:** No mutagenic components identified

#### In vivo

**Product:** No mutagenic components identified

### Reproductive toxicity

**Product:** No components toxic to reproduction

### Specific Target Organ Toxicity - Single Exposure

**Product:** Narcotic effect.

### Specific Target Organ Toxicity - Repeated Exposure

**Product:** None known.

#### Target Organs

Specific Target Organ Toxicity - Single Exposure: Narcotic effect.

### Aspiration Hazard

**Product:** May be harmful if swallowed and enters airways.



**Other effects:** None known.

## 12. Ecological information

### Ecotoxicity:

#### Acute hazards to the aquatic environment:

##### Fish

**Product:** LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 5,490 - 7,030 mg/l Mortality  
LC 50 (Bluegill (*Lepomis macrochirus*), 96 h): 8,300 mg/l Mortality

##### Aquatic Invertebrates

**Product:** LC 50 (Brine shrimp (*Artemia salina*), 24 h): 2,100 mg/l Mortality  
LC 50 (Water flea (*Daphnia magna*), 48 h): 12,100 mg/l Mortality

#### Chronic hazards to the aquatic environment:

##### Fish

**Product:** No data available.

##### Aquatic Invertebrates

**Product:** No data available.

##### Toxicity to Aquatic Plants

**Product:** No data available.

### Persistence and Degradability

#### Biodegradation

**Product:** Expected to be readily biodegradable.

#### BOD/COD Ratio

**Product:** No data available.

### Bioaccumulative potential

#### Bioconcentration Factor (BCF)

**Product:** No data available on bioaccumulation.

#### Partition Coefficient n-octanol / water (log Kow)

**Product:** Log Kow: -0.24

**Mobility in soil:** No data available.

**Other adverse effects:** The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

### 13. Disposal considerations

#### Disposal methods

<b>Disposal instructions:</b>	Discharge, treatment, or disposal may be subject to national, state, or local laws.
<b>Contaminated Packaging:</b>	Since emptied containers retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

#### China

UN Number:	UN 1090
UN Proper Shipping Name:	ACETONE
Transport Hazard Class(es)	
Class:	3
Label(s):	3
Packing Group:	II
Environmental Hazards:	No
Special precautions for user:	Not regulated.

#### IMDG

UN Number:	UN 1090
UN Proper Shipping Name:	ACETONE
Transport Hazard Class(es)	
Class:	3
Label(s):	3
EmS No.:	F-E, S-D
Packing Group:	II
Environmental Hazards:	No
Special precautions for user:	Not determined.

#### IATA

UN Number:	UN 1090
Proper Shipping Name:	Acetone
Transport Hazard Class(es):	
Class:	3
Label(s):	3
Packing Group:	II
Environmental Hazards:	No
Special precautions for user:	Not determined.

### 15. Regulatory information

#### China. National Catalogue of Hazardous Wastes

Acetone Listed.

**China. Highly Toxic Chemicals (Dept. of Health Notice)**

Not Regulated

**China. Very Toxic Chemicals (Public Notice No. 2)**

Not Regulated

**China. Precursor Chemicals (Decree No. 445 of the PRC on Regulation for Administration of Precursor Chemicals, Appendix: Categories 1-3)**

Acetone Listed.

**China: CWC. Controlled Chemicals List (Regulations on the Administration of Controlled Chemicals, Decree No. 190, Dec. 27, 1995, as amended)**

Not Regulated

**China. Explosive Precursor Hazardous Chemicals (Ministry of Public Safety, 2011 version)**

Not Regulated

**China. National List of Ozone Depleting Substances (MEP/NDRC/MIIT Joint Notice No. 2010-72)**

Not Regulated

**China. Catalog of Hazardous Chemicals**

Acetone Listed.

**International regulations****Montreal Protocol**

Not applicable

**Stockholm convention**

Not applicable

**Rotterdam Convention**

Not applicable

**Kyoto Protocol**

Not applicable

**Inventory Status:**

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
Japan ISHL Listing:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Mexico INSQ:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory

<b>16.Other Information</b>
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<b>Issue Date:</b>	10-13-2020
<b>Revision Date:</b>	No data available.
<b>Version #:</b>	2.5
<b>Further Information:</b>	No data available.

**References:** Sources of information used in preparing this SDS included one or more of the following: results from in house or supplier toxicology studies, information from the Toxicology Data Network (TOXNET), European Chemical Agency (ECHA) substance dossiers, IARC Monographs, US National Toxicology Program data, the Agency for Toxic Substances and Disease Registry, other manufacturer's SDSs and other sources, as appropriate.

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