

# SAFETY DATA SHEET

According to US Regulation 29 CFR 1910.1200 (HazCom 2012)

## 1. Identification

**Product identifier:** Acetone

### Other means of identification

**Synonyms:** 2-Propanone, Dimethyl ketone  
**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, A134, H451, H580, 10654, 63842, 70444

### Recommended restrictions

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

### Details of the supplier of the safety data sheet

#### Manufacturer

**Company Name:** Avantor Performance Materials, LLC.  
**Address:** 3477 Corporate Parkway  
Center Valley, PA 18034  
  
**Telephone:** Customer Service: 855-282-6867  
  
**Fax:** 610-573-2610  
**Contact Person:** Environmental Health & Safety  
**E-mail:** info@avantormaterials.com

### Emergency telephone number:

CHEMTREC: 1-800-424-9300 within US and Canada

## 2. Hazard(s) identification

### Hazard Classification

#### Physical Hazards

Flammable liquids Category 2

#### Health Hazards

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

#### Target Organs

1. Narcotic effect.

#### Unknown toxicity - Health

Acute toxicity, inhalation, vapor 100 %

Acute toxicity, inhalation, dust or mist 100 %

## Label Elements

### Hazard Symbol:



**Signal Word:** Danger

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

### Precautionary Statements

**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.

**Hazard(s) not otherwise classified (HNO):** Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

## 3. Composition/information on ingredients

## Substances

Chemical Identity	CAS number	Content in percent (%)*
Acetone	67-64-1	99 - 100%

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

## 4. First-aid measures

<b>General information:</b>	Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
<b>Ingestion:</b>	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.
<b>Inhalation:</b>	Move to fresh air. Get medical attention if symptoms persist.
<b>Skin Contact:</b>	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.
<b>Eye contact:</b>	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.

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

**Symptoms:** Narcotic effect.

**Hazards:** None known.

### Indication of immediate medical attention and special treatment needed

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

## 5. Fire-fighting measures

**General Fire Hazards:** Flammable liquid and vapor.

### Suitable (and unsuitable) extinguishing media

**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.

## 6. Accidental release measures

**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.

**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.

**Environmental Precautions:**

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

## 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	TWA	250 ppm	US. ACGIH Threshold Limit Values (03 2015)
	STEL	500 ppm	US. ACGIH Threshold Limit Values (03 2015)
	REL	250 ppm 590 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	1,000 ppm 2,400 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	750 ppm 1,800 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	1,000 ppm 2,400 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

	TWA	750 ppm 1,800 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	STEL	1,000 ppm 2,400 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	ST ESL	7,800 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (03 2014)
	AN ESL	4,800 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (03 2014)
	ST ESL	3,300 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (03 2014)
	AN ESL	2,000 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (03 2014)
	Ceiling	3,000 ppm	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	STEL	750 ppm 1,780 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	TWA PEL	500 ppm 1,200 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)

### 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

Physical state:	Liquid
Form:	Liquid
Color:	Colorless
Odor:	Sweet, mint-like
Odor threshold:	No data available.
pH:	5 - 6 (20 °C)
Melting point/freezing point:	-94.8 - 94.6 °C
Initial boiling point and boiling range:	56 °C (101.3 kPa)
Flash Point:	-20 - -17 °C (Closed Cup)
Evaporation rate:	No data available.
Flammability (solid, gas):	Class IB Flammable Liquid
<b>Upper/lower limit on flammability or explosive limits</b>	
Flammability limit - upper (%):	12.8 %(V)
Flammability limit - lower (%):	2.13 - 2.6 %(V)
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	30.9 kPa (25 °C) 233 - 240 hPa (20 °C) 530 - 560 hPa (40 °C)
Vapor density:	2
Density:	0.79 g/ml (20 °C)
Relative density:	0.80 (20 °C)
<b>Solubility(ies)</b>	
Solubility in water:	Miscible
Solubility (other):	Alcohol: Miscible benzene: Soluble chloroform: Miscible dimethylformamide: Miscible ether: Miscible
Partition coefficient (n-octanol/water):	-0.24
Auto-ignition temperature:	465 °C
Decomposition temperature:	No data available.
Viscosity:	No data available.
<b>Other information</b>	
Liquid conductivity:	0.6 µS/cm (25 °C)
Minimum ignition energy:	1.15 mJ
Molecular weight:	58.08 g/mol (C <sub>3</sub> H <sub>6</sub> O)

## 10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	Heat, sparks, flames.
Incompatible Materials:	Oxidizers, acids

<b>Hazardous Decomposition Products:</b>	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.
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## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation:</b>	May cause irritation to the respiratory system.
<b>Skin Contact:</b>	May cause irritation. Prolonged or repeated skin contact may cause drying, cracking, or 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)

<b>Oral</b>	
<b>Product:</b>	LD 50 (Rat): 5,800 mg/kg
<b>Dermal</b>	
<b>Product:</b>	LD 50 (Rabbit) 20,000 mg/kg
<b>Inhalation</b>	
<b>Product:</b>	LC 50 (Rat, 4 h) 50.1 - 76 mg/l

#### Repeated dose toxicity

<b>Product:</b>	No data available.
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#### Skin Corrosion/Irritation

<b>Product:</b>	Prolonged or repeated contact may cause irritation.
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#### Serious Eye Damage/Eye Irritation

<b>Product:</b>	Irritating to eyes.
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#### Respiratory or Skin Sensitization

<b>Product:</b>	Not a skin sensitizer.
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#### Carcinogenicity

<b>Product:</b>	This substance has no evidence of carcinogenic properties.
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#### IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

#### US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

## 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 instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws.

**Contaminated Packaging:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

#### DOT

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

#### 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
Marine Pollutant:	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
Marine Pollutant:	No
Special precautions for user:	Not determined.

## 15. Regulatory information

### US Federal Regulations

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

#### CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Acetone	5000 lbs.

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

##### Hazard categories

Flammable liquids  
Serious Eye Damage/Eye Irritation  
Specific Target Organ Toxicity - Single Exposure  
Static-accumulating flammable liquid

##### SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

##### SARA 304 Emergency Release Notification

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Acetone	5000 lbs.

##### SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Acetone	10000 lbs.

##### SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

#### Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):

None present or none present in regulated quantities.

### US State Regulations

#### US. California Proposition 65

No ingredient regulated by CA Prop 65 present.

#### US. New Jersey Worker and Community Right-to-Know Act

<u>Chemical Identity</u>
Acetone

#### US. Massachusetts RTK - Substance List

<u>Chemical Identity</u>
Acetone

**US. Pennsylvania RTK - Hazardous Substances**

**Chemical Identity**

Acetone

**US. Rhode Island RTK**

**Chemical Identity**

Acetone

**International regulations**

**Montreal protocol**

Not applicable

**Stockholm convention**

Not applicable

**Rotterdam convention**

Not applicable

**Kyoto protocol**

Not applicable

**Inventory Status:**

Australia AICS:

Canada DSL Inventory List:

EINECS, ELINCS or NLP:

Japan (ENCS) List:

China Inv. Existing Chemical Substances:

Korea Existing Chemicals Inv. (KECI):

Philippines PICCS:

US TSCA Inventory:

New Zealand Inventory of Chemicals:

Mexico INSQ:

Taiwan Chemical Substance Inventory:

On or in compliance with the inventory

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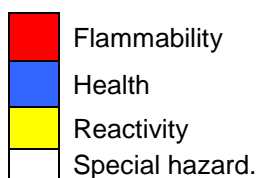
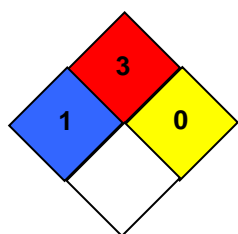
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**16. Other information, including date of preparation or last revision**

**NFPA Hazard ID**



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

**Issue Date:** 06-11-2018

**Revision Information:** Not relevant.

<b>Version #:</b>	3.7
<b>Source of information:</b>	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.
<b>Further Information:</b>	No data available.
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