

# Safety Data Sheet

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

## SECTION 1: Identification

### Product identifier

Trade name/designation:	Acetone CMOS
Product No.:	9005
Synonyms:	none

### Relevant identified uses of the substance or mixture and uses advised against

<b>Recommended use</b>	For Laboratory, Research or Manufacturing Use.
<b>Uses advised against</b>	Not determined.

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

#### Supplier

##### Avantor Performance Materials, LLC.

Street	100 Matsonford Rd, Suite 200
Postal code/City	Radnor, PA 19087, United States
Telephone	+1-855-282-6867
Telefax	+1-610-573-2610

#### Emergency phone number

Telephone	+1-800-424-9300 (Chemtrec, 24 hrs/day, 7 days/week, USA and Canada)
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#### Preparation Information

Product Information Compliance

E-mail	SDS@avantorsciences.com
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## SECTION 2: Hazard identification

### Classification of the substance or mixture

#### Label elements

##### Physical hazards

Flammable liquid, category 2

##### Health hazards

Eye irritation, category 2

Specific target organ toxicity (single exposure), category 3, narcotic effect

#### Hazard pictograms



#### Signal word: Danger

##### Hazard statements

H225 - Highly flammable liquid and vapor.

H319 - Causes serious eye irritation.

H336 - May cause drowsiness or dizziness.

##### Precautionary statements

###### Prevention:

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P243 - Take precautionary measures against static discharge.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

###### Response:

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.

###### Storage:

P403+P235 - Store in a well-ventilated place. Keep cool.

#### Hazard(s) not otherwise classified (HNOC)

none

## SECTION 3: Composition/information on ingredients

#### Substances

Substance name:	Acetone
Molecular formula:	CH <sub>3</sub> COCH <sub>3</sub>
Molecular weight:	58.08 g/mol

**SECTION 4: First aid measures****General information**

Do not leave affected person unattended. If unconscious but breathing normally, place in recovery position and seek medical advice. Take off immediately all contaminated clothing. Highly flammable liquid and vapor. Wash contaminated clothing before reuse. When in doubt or if symptoms are observed, get medical advice.

**In case of inhalation**

Remove casualty to fresh air and keep warm and at rest. In case of respiratory tract irritation, consult a physician.

**In case of skin contact**

Remove contaminated, saturated clothing immediately. Wash off any skin contamination immediately. When in doubt or if symptoms are observed, get medical advice.

**After eye contact:**

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Consult an ophthalmologist.

**In case of ingestion**

Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person or a person with cramps. Call a POISON CENTER.

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

Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation). In severe cases, pneumonia or a pulmonary oedema may develop. May cause headaches, nausea, vomiting and gastrointestinal disturbances. Conjunctivitis. Unconsciousness.

**Indication of any immediate medical attention and special treatment needed**

Treat symptomatically. Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours. Monitor respiration. Apply cortisone spray at early stage. After swallowing: activated charcoal (20-60 g) and sodium sulfate (1 tablespoon/250 ml) should reduce absorption.

**SECTION 5: Fire fighting measures****Extinguishing media****Suitable extinguishing media**

ABC-powder  
Carbon dioxide (CO<sub>2</sub>).  
Dry sand  
Nitrogen

**Extinguishing media which must not be used for safety reasons**

Full water jet.

**Specific hazards arising from the chemical**

Flammable liquids.  
Risk of ignition.  
Causes eye irritation.  
The product causes narcotic-like effects.  
Vapor may form explosive mixtures with air.  
Fire may produce irritating, corrosive and/or toxic gases.  
In case of fire may be liberated:  
Carbon monoxide

Carbon dioxide (CO<sub>2</sub>).

### **Advice for firefighters**

In case of fire and/or explosion do not breathe fumes.

Protective equipment and precautions for firefighters:

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

Co-ordinate fire-fighting measures to the fire surroundings.

## **SECTION 6: Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel: Wear personal protection equipment (refer to section 8). Avoid contact with eyes and skin. Do not breathe gas/fume/vapor/spray. Keep away from sources of ignition - No smoking.

Provide adequate ventilation. Remove victim out of the danger area. First Aid, decontamination, treatment of symptoms. For emergency responders: Wear a self-contained breathing apparatus and chemical protective clothing. Wear fire/flame resistant/retardant clothing.

### **Environmental precautions**

Do not allow to enter into surface water or drains. Fire hazard.

### **Methods and material for containment and cleaning up**

Take up mechanically, placing in appropriate containers for disposal. Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Dispose according to legislation. Ventilate affected area.

### **Additional information**

Personal protection equipment (PPE): see section 8 Disposal information: see section 13

## **SECTION 7: Handling and storage**

### **Precautions for safe handling**

Advices on safe handling

Vapors may form explosive mixtures with air.

Use personal protective equipment as required.

Use extractor hood (laboratory).

Use only in well-ventilated areas.

Avoid breathing vapours.

Avoid contact with eyes and skin.

Measures to prevent fire, aerosol and dust generation

Usual measures for fire prevention.

Have fire-extinguishers in readiness before opening containers.

Take precautionary measures against static discharges.

Use only in well-ventilated areas.

Measures required to protect the environment

Do not empty into drains.

Collect spillage.

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

### Conditions for safe storage, including any incompatibilities

Recommended storage temperature: Ambient temperature

Storage: Keep container tightly closed and in a well-ventilated place. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Take precautionary measures against static discharge. Protect from sunlight. Suitable container/equipment material: Glass High density polyethylene (HDPE) Stainless steel

Unsuitable container/equipment material: No information available.

## SECTION 8: Exposure controls/personal protection

### Control parameters

Ingredient (Designation)	Source	Country	parameter	Limit value
Acetone	NIOSH	US	LTV	590 mg/m <sup>3</sup> - 250 ppm
Acetone	OSHA	US	LTV	2400 mg/m <sup>3</sup> - 1000 ppm

### Engineering controls

#### 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.

#### Personal protection equipment (PPE)

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

##### *Eye/face protection*

Eye glasses 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.

##### By short-term hand contact

Suitable material: CR (polychloroprene, chloroprene rubber)

Thickness of the glove material: 0,75 mm

Breakthrough time < 30 min

##### By long-term hand contact

Suitable material: Butyl caoutchouc (butyl rubber)

Thickness of the glove material: 0,50 mm

Breakthrough time > 480 min

##### *Respiratory protection*

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 eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

*Environmental exposure controls*  
no data available

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

- |                     |                   |
|---------------------|-------------------|
| (a) Appearance      |                   |
| Physical state:     | liquid            |
| Color:              | colorless         |
| (b) Odor:           | characteristic    |
| (c) Odor threshold: | no data available |

### Safety relevant basic data

- |  |  |
|--|--|
| (d) pH:                                      | 5-6 (400 g/l; H <sub>2</sub> O; 20 °C) |
| (e) Melting point/freezing point:            | -95.4 °C                               |
| (f) Initial boiling point and boiling range: | 56.2 °C (1013 hPa)                     |
| (g) Flash point:                             | -20 °C (closed cup)                    |
| (h) Evaporation rate:                        | no data available                      |
| (i) Flammability (solid, gas):               | Highly flammable liquid and vapor.     |
| (j) Flammability or explosive limits         |  |
| Lower explosion limit:                       | 2.6 % (v/v)                            |
| Upper explosion limit:                       | 12.8 % (v/v)                           |
| (k) Vapor pressure:                          | 233 hPa (20 °C)                        |
| (l) Vapor density:                           | 2.01 (20 °C)                           |
| (m) Density:                                 | 0.792 g/cm <sup>3</sup> (20 °C)        |
| (n) Solubility(ies)                          |  |
| Water solubility:                            | soluble (20 °C)                        |
| Soluble (g/L) in Ethanol:                    | no data available                      |
| (o) Partition coefficient: n-octanol/water:  | -0.24 (20 °C)                          |
| (p) Auto-ignition temperature:               | 465 °C (DIN 51794)                     |
| (q) Decomposition temperature:               | not applicable                         |
| (r) Viscosity                                |  |
| Kinematic viscosity:                         | no data available                      |
| Dynamic viscosity:                           | 0.32 mPa*s (20 °C)                     |
| (s) Explosive properties:                    | not applicable                         |
| (t) Oxidising properties:                    | not applicable                         |

### Other information

- |                        |                        |
|------------------------|------------------------|
| Bulk density:          | no data available      |
| Refraction index:      | 1.3591 (589 nm; 20 °C) |
| Dissociation constant: | no data available      |
| Surface tension:       | no data available      |
| Henry's Law Constant:  | no data available      |

## SECTION 10: Stability and reactivity

### Reactivity

- Vapor may form explosive mixtures with air.
- Risk of ignition.
- Risk of ignition if heated.

**Chemical stability**

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

**Possibility of hazardous reactions**

Formation of explosive mixtures with:

Oxidizing agent, strong.

Chlorine

Iodine

Peroxides

**Conditions to avoid**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**Incompatible materials:**

Rubber articles

Plastic articles

**Hazardous decomposition products**

Decomposition products in case of fire: see section 5.

**SECTION 11: Toxicological information****Information on toxicological effects****Acute effects**

*Acute oral toxicity:*

LD50: > 5800 mg/kg - Rat - (RTECS)

*Acute dermal toxicity:*

LD50: > 20000 mg/kg - Rabbit - (IUCLID)

*Acute inhalation toxicity:*

LC50: > 76 mg/l (4 h) - Rat

**Irritant and corrosive effects:**

*Primary irritation to the skin:*

not applicable

*Irritation to eyes:*

Causes serious eye irritation.

*Irritation to respiratory tract:*

not applicable

**Respiratory or skin sensitization**

In case of skin contact: not sensitizing

In case of inhalation: not sensitizing

**STOT-single exposure**

May cause drowsiness or dizziness.

**STOT-repeated exposure**

not applicable

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****Carcinogenicity**

No indication of human carcinogenicity.

**Germ cell mutagenicity**

No indications of human germ cell mutagenicity exist.

**Reproductive toxicity**

No indications of human reproductive toxicity exist.

**Aspiration hazard**

not applicable

**Other adverse effects**

no data available

**SECTION 12: Ecological information****Ecotoxicity****Fish toxicity:**

LC50: 4350 - 11000 mg/l (96 h) - 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: 13500 - 23500 mg/l (48 h) - 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: 10 - 30600 mg/l (48 h) - Cowgill, U.M., and D.P. Milazzo 1991. The Sensitivity of Ceriodaphnia dubia and Daphnia magna to Seven Chemicals Utilizing the Three-Brood 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) (ENG ABS) (NTIS/PB83-200386)

**Bacteria toxicity:**

EC10: 1 000 mg/l (30 min) - OECD 209

**Persistence and degradability**

Biodegradable.

**Bioaccumulative potential**

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

**Mobility in soil:**

no data available

**Other adverse effects**

no data available



## SECTION 13: Disposal considerations

### Waste treatment methods

#### Appropriate disposal / Product

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

#### Appropriate disposal / Package

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

## SECTION 14: Transport information

### Land transport (DOT)

UN-No.:	UN1090
Proper Shipping Name:	ACETONE
Class(es):	3
Hazard label(s):	3
Packing group:	II
Environmental hazards:	No
Marine pollutant:	No
Special precautions for user:	

### Sea transport (IMDG)

UN-No.:	1090
Proper Shipping Name:	ACETONE
Class(es):	3
Hazard label(s):	3
Packing group:	II
Environmental hazards:	No
Marine pollutant:	No
Special precautions for user:	
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

### Air transport (ICAO-TI / IATA-DGR)

UN-No.:	1090
Proper Shipping Name:	ACETONE
Class(es):	3
Classification code:	
Hazard label(s):	3
Packing group:	II
Special precautions for user:	

<b>SECTION 15: Regulatory information</b>
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**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**National regulations**

**Toxic Substances Control Act (TSCA)**

Listed

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**SARA 313 Components**

Not listed.

**US State Regulations**

**Massachusetts Right To Know Components**

Listed

**Pennsylvania Right To Know Components**

Listed

**New Jersey Right To Know Components**

Listed

**California Prop. 65 Components**



**WARNING:**

This product can expose you to chemicals including Acetone which is known to the State of California to cause cancer.

For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## SECTION 16: Other information

### Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists  
DOT - Department of Transportation  
IARC - International Agency for Research on Cancer  
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations  
ICAO-TI - International Civil Aviation Organization-Technical Instructions  
IMDG - International Maritime Code for Dangerous Goods  
LTV - Long Term Value  
NIOSH - National Institute for Occupational Safety and Health  
NTP - National Toxicology Program  
OSHA - Occupational Safety & Health Administration  
PBT - Persistent, Bioaccumulative and Toxic  
PEL - Permissible Exposure Limit  
STV - Short Term Value  
SVHC - Substances of Very High Concern  
TDG - Transport of Dangerous Goods  
TLV - Threshold Limit Value  
vPvB - very Persistent, very Bioaccumulative

### Key literature references and sources for data

This Safety Data Sheet has been prepared based on information available for public as TOXNET information, European Chemicals Agency (ECHA) substance dossier, papers from international cancer research institutes (IARC Monographs), U.S. National Toxicology Program data, U.S. Agency for Toxic Substances and Disease Control (ATSDR), PubChem websites and SDS from our raw material manufacturers.

Revision date	Version	Print date
17.01.2024	1.0	2024-01-17

### Additional information

Indication of changes:

general update

If you need an explanation of the change, contact the supplier (SDS@avantorsciences.com).

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