

SAFETY DATA SHEET

1. Identification of the hazardous chemical 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
Common name(s), synonym(s): 2-Propanone

Recommended use of the chemical and restrictions on use

Recommended use: For Laboratory, Research or Manufacturing Use.
Recommended restrictions: 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: Customer Service: 855-282-6867
Fax:
Contact Person: Product Information Compliance
E-mail: info@avantormaterials.com

Emergency telephone number: CHEMTREC: 1-800-815-308 (24/7)

2. Hazard(s) identification

GHS classification of substance or mixture, and national or regional information:

Physical Hazards

Flammable liquids Category 2

Health Hazards

Serious Eye Damage/Eye Irritation Category 2
 Specific Target Organ Toxicity - Single Exposure Category 3
 Aspiration Hazard Category 2

Unknown toxicity- Environment

Acute hazards to the aquatic environment 0 %
 Chronic hazards to the aquatic environment 99.5 %

GHS label elements

Hazard symbol(s):



Signal Word: Danger

Hazard Statement(s): 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: 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 and information of the ingredients of the hazardous chemical

Substances

Chemical Identity	Common name and synonyms	CAS Number	Concentration*
Acetone	, 2-Propanone	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.

Most important symptoms/effects, acute and delayed

Symptoms: Narcotic effect.

Hazards: No data available.

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 action for fire fighters

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.

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 to ensure 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	Time Weighted Average (TWA):	500 ppm 1,187 mg/m3	Malaysia. OELs. (Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations)03 2000
Acetone	TWA	250 ppm	US. ACGIH Threshold Limit Values (03 2015)
	STEL	500 ppm	US. ACGIH Threshold Limit Values (03 2015)

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

General information: 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.

Eye/face protection: Wear safety glasses with side shields (or goggles) and a face shield.

Skin Protection

Hand Protection:	Chemical resistant gloves
Other:	Wear suitable protective clothing and gloves.
Respiratory Protection:	In case of inadequate ventilation use suitable respirator. Chemical respirator with organic vapor cartridge.
Hygiene measures:	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
Upper/lower limit on flammability or explosive limits	
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:	233 - 240 hPa (20 °C) 309 hPa (25 °C) 530 - 560 hPa (40 °C)
Vapor density:	2
Relative density:	0.80 (20 °C)
Solubility(ies)	
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.
Other information	
Liquid conductivity:	0.6 µS/cm (25 °C)
Minimum ignition energy:	1.15 mJ
Molecular weight:	58.08 g/mol ((CH ₃) ₂ CO)

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. Contact with incompatible materials.
Incompatible Materials:	Strong acids. Strong oxidizing agents.
Hazardous Decomposition Products:	Thermal decomposition may release oxides of carbon.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	May cause irritation to the respiratory system.
Skin Contact:	Prolonged skin contact may cause temporary irritation.
Eye contact:	Causes serious eye irritation.
Ingestion:	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 ,4 h): 50.1 - 76 mg/l

Repeated dose toxicity Product:	No data available.
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Skin Corrosion/Irritation Product:	Prolonged skin contact may cause temporary irritation.
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Serious Eye Damage/Eye Irritation Product:	Causes serious eye irritation.
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Respiratory or Skin Sensitization Product:	Not a skin nor a respiratory sensitizer.
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ACGIH Sensitization

Carcinogenicity Product:	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

ACGIH Carcinogen List:

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.

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

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 information

Disposal methods

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

ADR

14.1 UN Number: UN 1090
 14.2 UN Proper Shipping Name: ACETONE
 14.3 Transport Hazard Class(es)
 Class(es): 3
 Label(s): 3
 Hazard No. (ADR): 33
 Tunnel restriction code: (D/E)
 14.4 Packing Group: II

 Marine Pollutant: Not a Marine Pollutant
 Limited quantity
 Excepted quantity
 14.8 Environmental Hazards: Not a Marine Pollutant
 14.9 Special precautions for user: –

IATA

UN Number: UN 1090
 Proper Shipping Name: Acetone
 Transport Hazard Class(es):
 Class(es): 3
 Label(s): 3
 Packing Group: II
 Environmental Hazards
 Marine pollutant: Not a Marine Pollutant
 Special precautions for user: –

IMDG

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

Special precautions for user: –

15. Regulatory information

Malaysia. Medical Surveillance Chemicals, Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health): Schedule 2

Not Regulated

Malaysia. Prohibited Use of Substances [Occupational Safety and Health (Prohibition of Use of Substance) Order]

Not Regulated

Malaysia. Controlled Precursors Subject to Conditional Exports (Customs (Prohibition of Exports) Order 2012, Second Schedule

Acetone

Malaysia. Controlled Precursors Subject to Conditional Imports (Customs (Prohibition of Imports) Order 2012, Part I of Second Schedule)

Not Regulated

Malaysia. CWC. Chemical Weapons Convention Act 2005, (Schedules 1-3)

Not Regulated

Malaysia. Ozone Depleting Substances (ODS) (Environmental Quality (Prohibition on the Use of CFC and Other Gases as Propellants and Blowing Agents) Order 1993)

Not Regulated

Malaysia. Lists of Halon Management (Environmental Quality (Halon Management) Regulation 1999)

Not Regulated

Malaysia. Refrigerant Hazardous Substance (Environmental Quality (Refrigerant Management) Regulation 1999)

Not Regulated

Malaysia. Active Ingredients of Pesticide Product (Pesticide Act 1974, First Schedule), as amended

Not Regulated

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

16. Other information, including date of preparation or last revision
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Issue Date: 10-13-2020

Revision Date: No data available.

Version #: 3.7

Source of information: 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.

Further Information: No data available.

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