

SAFETY DATA SHEET

1. Identification

Product identifier: ACETONE

Other means of identification

Synonyms: 2-Propanone, Dimethyl ketone
Product No.: 2462, 2572, 2570, 9422, 9036, 9015, 9010, 9009, 9008, 9006, 9005, 9003, 9002, 2443, 2437, 2435, 2432, H580, 5975, 5965, H451, 2440, A134, 5580, 5356, 5018, 5008, 9271, 9254, 70444, 10654

Recommended use and restriction on use

Recommended use: Not available.
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company Name: Avantor Performance Materials, Inc.
Address: 3477 Corporate Parkway, Suite 200
Center Valley, PA 18034
Telephone: Customer Service: 855-282-6867
Fax:
Contact Person: Environmental Health & Safety
e-mail: info@avantormaterials.com

Emergency telephone number:

24 Hour Emergency: 908-859-2151
Chemtrec: 800-424-9300

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 - single exposure Category 3

Label elements

Hazard symbol:



Signal word: Danger

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

Precautionary statement

- Prevention:** 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. Avoid breathing dust/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
- Response:** In case of fire: Use water spray, foam, dry powder or carbon dioxide for extinction. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/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.
- Storage:** Store in a well-ventilated place. Keep cool. Keep container tightly closed. 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/information on ingredients

Substances

| Chemical identity | Common name and synonyms | 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

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

Most important symptoms/effects, acute and delayed

Symptoms: Narcotic effect.

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 MSDS 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: Eliminate all ignition sources if safe to do so. Take precautionary measures against static discharges. Stop leak if possible without any risk. Use only 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/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 | 500 ppm | US. ACGIH Threshold Limit Values (2011) |
| | STEL | 750 ppm | US. ACGIH Threshold Limit Values (2011) |
| | TWA | 200 ppm | US. ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values (2011) |
| | STEL | 500 ppm | US. ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values (2011) |
| | 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) |

Biological limit values

| Chemical identity | Exposure Limit values | Source |
|--|-----------------------|------------------|
| ACETONE (acetone: Sampling time: End of shift.) | 50 mg/l (Urine) | ACGIH BEL (2011) |

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.

| | |
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| 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: | No data available. |
| Melting point/freezing point: | -94.7 °C |
| Initial boiling point and boiling range: | 56 °C (101.3 kPa) |
| Flash Point: | -20 °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 (%): | 2.6 %(V) |
| Explosive limit - upper (%): | No data available. |
| Explosive limit - lower (%): | No data available. |
| Vapor pressure: | 30.9 kPa (25 °C) |
| Vapor density: | 2 |
| Relative density: | 0.79 (20 °C) |
| Solubility(ies) | |
| Solubility in water: | Miscible with water. |
| Solubility (other): | No data available. |
| Partition coefficient (n-octanol/water): | -0.24 |
| Auto-ignition temperature: | 465 °C |
| Decomposition temperature: | No data available. |
| Viscosity: | No data available. |
| Other information | |
| Molecular weight: | 58.08 g/mol (C ₃ H ₆ 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. |

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| Incompatible materials: | Oxidizers, acids |
| Hazardous decomposition products: | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. |

11. Toxicological information

Information on likely routes of exposure

| | |
|----------------------|--|
| Ingestion: | Harmful if swallowed. |
| Inhalation: | May cause irritation to the respiratory system. |
| Skin contact: | Causes mild skin irritation. Prolonged or repeated skin contact may cause drying, cracking, or irritation. |
| Eye contact: | Causes eye irritation. |

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): 76 mg/l |

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| Repeated dose toxicity | |
| Product: | No data available. |

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|----------------------------------|---|
| Skin corrosion/irritation | |
| Product: | Prolonged or repeated contact may cause irritation. |

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| Serious eye damage/eye irritation | |
| Product: | Irritating to eyes. |

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| Respiratory or skin sensitization | |
| Product: | Not a skin sensitizer. |

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| Carcinogenicity | |
| Product: | This substance has no evidence of carcinogenic properties. |

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: Suspected of damaging fertility or the unborn child.

Specific target organ toxicity - single exposure

Product: Respiratory tract irritation. Narcotic effect.

Specific target organ toxicity - repeated exposure

Product: None known.

Aspiration hazard

Product: Not classified

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(es): 3
 Label(s): 3
 Packing group: II
 Marine Pollutant: No

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
 Marine Pollutant: No

IATA

UN number: UN 1090
 Proper Shipping Name: Acetone
 Transport hazard class(es)
 Class(es): 3
 Label(s): 3
 Marine Pollutant: No
 Packing group: II

15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
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):
 ACETONE Reportable quantity: 5000 lbs.

Superfund amendments and reauthorization act of 1986 (SARA)

Hazard categories

Acute (Immediate) Chronic (Delayed) Fire Reactive Pressure Generating

SARA 302 Extremely hazardous substance
 None present or none present in regulated quantities.

SARA 304 Emergency release notification

| Chemical identity | RQ |
|-------------------|-----------|
| ACETONE | 5000 lbs. |

SARA 311/312 Hazardous chemical

| Chemical identity | Threshold Planning Quantity |
|-------------------|-----------------------------|
| ACETONE | 500 lbs |

SARA 313 (TRI reporting)

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.

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

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

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| ACETONE | Listed |
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US. Massachusetts RTK - Substance List

| | |
|---------|--------|
| ACETONE | Listed |
|---------|--------|

US. Pennsylvania RTK - Hazardous Substances

| | |
|---------|--------|
| ACETONE | Listed |
|---------|--------|

US. Rhode Island RTK

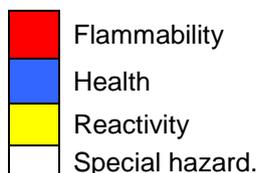
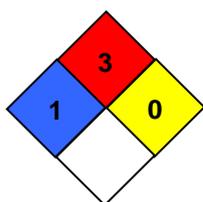
| | |
|---------|--------|
| ACETONE | Listed |
|---------|--------|

Inventory Status:

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

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

Issue date: 06-17-2014

Revision date: No data available.

Version #: 1.0

Further information: No data available.

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