

# SAFETY DATA SHEET

## 1. PRODUCT AND COMPANY IDENTIFICATION

**A. Product name:** 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

**B. Recommended use and Limitations on use:**

**Recommended use:** For Laboratory, Research or Manufacturing Use.

**Restrictions on use:** Not determined.

**C. Details of the supplier of the safety data sheet:**

**Company Name:** Avantor Performance Materials Korea Limited  
**Address:** 201-204, Ace Gwanggyo tower 1, Daehak 4ro 17, Yeongtong-gu, Suwon, Korea 16226

**Telephone:** 82-31-645-7250

**Fax:** 82-31-645-7279

**Emergency telephone number:** CHEMTREC: 080-822-1374 (24/7)

## 2. HAZARDS IDENTIFICATION

**A. Hazard category/Classification:**

**Physical Hazards**

Flammable liquids Category 2

**Health Hazards**

Serious Eye Damage/Eye Irritation Category 2

Specific Target Organ Toxicity - Single Exposure Category 3<sup>1</sup>

Aspiration Hazard Category 2

**Target Organs**

- Narcotic effect.

**B. Warning label items including precautionary statement:**

**Pictograms:**



**Signal Words:** Danger

**Hazard Statement(s):** H225: Highly flammable liquid and vapor.  
H319: Causes serious eye irritation.  
H336: May cause drowsiness or dizziness.  
H305: May be harmful if swallowed and enters airways.

**Precautionary Statements:**

**Prevention:** P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233: Keep container tightly closed.  
P241: Use explosion-proof [electrical/ventilating/lighting] equipment.  
P240: Ground and bond container and receiving equipment.  
P242: Use non-sparking tools.  
P243: Take action to prevent static discharges.  
P264: Wash thoroughly after handling.  
P261: Avoid breathing dust/mist/vapors/spray.  
P271: Use only outdoors or in a well-ventilated area.

**Response:** P370+P378: In case of fire: Use water spray, foam, dry powder or carbon dioxide for extinction.  
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313: If eye irritation persists: Get medical advice/attention.  
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P312: Call a POISON CENTER/doctor if you feel unwell.  
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
P331: Do NOT induce vomiting.

**Storage:** P403+P235: Store in a well-ventilated place. Keep cool.  
P405: Store locked up.

**Disposal:** P501: 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.

**C. Other hazards not included in the hazard category criteria:** No data available.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

**Substances**

Chemical name	Common name and synonyms	CAS number	KECI No.	Content in percent (%)
Acetone	, 2-Propanone	67-64-1	KE-29367	100%

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

**4. FIRST AID MEASURES**

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

**A. In case of 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.

- B. In case of 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.
- C. In case of inhalation:** Move to fresh air. Get medical attention if symptoms persist.
- D. In case of swallowing:** 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.
- E. Notes to the physician:**
- Hazards:** No data available.
- Symptoms:** Narcotic effect.
- Treatment:** Symptoms may be delayed. Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

- General Fire Hazards:** Flammable liquid and vapor.
- A. 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.
- B. Special hazards arising from the substance or mixture:** 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.
- C. Specific methods of fire-fighting:** 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

- A. 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.
- B. Environmental Precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

**C. 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.

Inform authorities if large amounts are involved.

**7. HANDLING AND STORAGE**

**A. 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.

**B. 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**

**A. Exposure limit values, biological values, etc.:**

**Occupational Exposure Limits**

Chemical name	Type	Exposure Limit Values	Source
Acetone	STEL	750 ppm	Korea. OELs. Standards for Exposure to Chemical Substances and Physically Hazardous Factors (08 2016)
	TWA	500 ppm	Korea. OELs. Standards for Exposure to Chemical Substances and Physically Hazardous Factors (08 2016)

**Biological Limit Values**

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

**B. Appropriate engineering controls:**

No data available.

**C. Personal protective equipment (ppe):**

**Respiratory Protection:** In case of inadequate ventilation use suitable respirator. Chemical respirator with organic vapor cartridge.

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

**Hand Protection:** Chemical resistant gloves

**Body protection:** Wear suitable protective clothing and gloves.

**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

### A. Appearance:

**Physical state:** Liquid  
**Form:** Liquid  
**Color:** Colorless

**B. Odor:** Sweet, mint-like

**C. Odor Threshold:** No data available.

**D. pH:** 5 - 6 (20 °C)

**E. Melting point/freezing point:** -94.8 - 94.6 °C

**F. Boiling point, initial boiling point, and boiling range:** 56 °C (101.3 kPa)

**G. Flash Point:** -20 - -17 °C (Closed Cup)

**H. Evaporation Rate:** No data available.

**I. Flammability (solid, gas):** Class IB Flammable Liquid

### J. Upper/lower limit on flammability or explosive limits:

**Flammability Limit - Upper (%):** 12.8 %(V)

**Flammability Limit - Lower (%):** 2.13 - 2.6 %(V)

**Dust Explosion Limit, Upper:** No data available.

**Dust Explosion Limit, Lower:** No data available.

**K. Vapor pressure:** 233 - 240 hPa (20 °C) 309 hPa (25 °C) 530 - 560 hPa (40 °C)

### L. Solubility(ies):

**Solubility in Water:** Miscible

**Solubility (other):** Alcohol: Miscible  
 benzene: Soluble  
 chloroform: Miscible  
 dimethylformamide: Miscible  
 ether: Miscible

**M. Vapor density (air=1):** 2

**N. Specific Gravity:** 0.80 (20 °C)

**O. Partition coefficient (n-octanol/water):** -0.24

**P. Autoignition Temperature:** 465 °C

**Q. Decomposition Temperature:** No data available.

**R. Viscosity:** No data available.

**S. Molecular weight:** 58.08 g/mol ((CH<sub>3</sub>)<sub>2</sub>CO)

### Other information:

**Minimum ignition energy:** 1.15 mJ

## 10. STABILITY AND REACTIVITY

### A. Stability and hazardous reaction potential

**Stability:** Material is stable under normal conditions.

- Possibility of hazardous reactions:** Hazardous polymerization does not occur.
- B. Conditions to avoid:** Heat, sparks, flames. Contact with incompatible materials.
- C. Incompatible Materials:** Strong acids. Strong oxidizing agents.
- D. Hazardous Decomposition Products:** Thermal decomposition may release oxides of carbon.

## 11. TOXICOLOGICAL INFORMATION

### A. 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.

### B. Information on health hazards:

#### 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.

#### ACGIH Carcinogens

No carcinogenic components identified

#### IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

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**

**A. 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.

**B. Persistence and Degradability**

**Biodegradation**

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

**BOD/COD Ratio**

**Product:** No data available.

**C. Bioaccumulative potential**

**Bioconcentration Factor (BCF)**

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

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

**Product:** Log Kow: -0.24

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

**E. 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**

**A. Method of disposal:** Discharge, treatment, or disposal may be subject to national, state, or local laws.

**B. Disposal considerations (including disposal of contaminated containers or packaging):** No data available.

**14. TRANSPORT INFORMATION**

**IMDG**

A.: UN Number: UN 1090  
 B.: UN Proper Shipping Name: ACETONE  
 C.: Transport Hazard Class(es)  
     Class: 3  
     Label(s): 3  
     EmS No.: F-E, S-D  
 D.: Packing Group: II  
 E.: Marine Pollutant: No  
 F.: Special precautions, which a user needs to be aware of, or needs for transportation and transport methods: Not determined.

**IATA**

A.: UN Number: UN 1090  
 B.: Proper Shipping Name: Acetone  
 C.: Transport Hazard Class(es)  
     Class: 3  
     Label(s): 3  
 D.: Packing Group: II  
 E.: Marine Pollutant: No  
 F.: Special precautions, which a user needs to be aware of, or needs for transportation and transport methods: Not determined.

**15. REGULATORY INFORMATION**

**A. Restriction under the Industrial Safety and Health Law:**

**Harmful Substances Prohibited from Manufacturing**  
None present or none present in regulated quantities.

**Harmful Substances Requiring Permission for Manufacture or Use**  
None present or none present in regulated quantities.



### Controlled Hazardous Substances

**Chemical name**

Acetone (67-64-1)	Listed
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### Harmful Substances Requiring Special Medical Examination

**Chemical name**

Acetone (67-64-1)	Listed
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### Harmful Substances Requiring Workplace Environment Monitoring

**Chemical name**

Acetone (67-64-1)	Listed
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### B. Restrictions under the Chemicals Control Law:

#### Accidental Release Prevention Substances

None present or none present in regulated quantities.

### C. Restrictions under the Dangerous Substances Safety Management Act:

#### Dangerous Substances Safety Management Act

Chemical name	Class	Threshold limit value
Acetone (67-64-1)	Class 4: Flammable liquid.	200 liters

### D. Restrictions under the Wastes Control Act:

#### Halogenated Materials in Waste Organic Solvents

Not Regulated

### E. Restrictions under other foreign or domestic laws:

#### Clean Air Conservation Act

##### Air Pollutants

Not Regulated

##### Specific Air Pollutants

Not Regulated

### Act on the Registration and Evaluation of Chemicals

#### Banned Toxic Chemicals

None present or none present in regulated quantities.

#### Designated Existing Chemicals Subject to Registration (PEC) (MoE No. 2015-92)

Not Regulated

#### Restricted Chemical Substances

None present or none present in regulated quantities.

#### Toxic Chemicals

None present or none present in regulated quantities.

#### Inventory Status

AICS	On or in compliance with the inventory
DSL	On or in compliance with the inventory
IECSC	On or in compliance with the inventory
ENCS (JP)	On or in compliance with the inventory

ISHL (JP)	Not in compliance with the inventory.
KECI (KR)	On or in compliance with the inventory
INSQ	On or in compliance with the inventory
NZIOC	On or in compliance with the inventory
PICCS (PH)	On or in compliance with the inventory
TCSI	On or in compliance with the inventory
TSCA	On or in compliance with the inventory
EU INV	On or in compliance with the inventory

## 16. OTHER INFORMATION

**A. 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.

**B. Issue Date:** 06/17/2014

**C. Number of revisions and date of most recent revision:** 9  
10/13/2020

**D. Other:** No data available.

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