

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended 2015/830.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name:	Acetone
Product No.	2462, 2572, 2570, 9422, 9036, 9015, 9010, 9009, 9008, 9006, 9005, 9003, 9002, 2443, 2437, 2435, 2432, H580, 5975, 5965, H451, 2440, 8142, 9254, 2600, 8002, 8003, 3413, 2687
Synonyms, Trade Names:	2-Propanone, Dimethyl ketone
Additional identification	
Chemical name:	Acetone
Chemical formula:	C ₃ H ₆ O
INDEX No.	606-001-00-8
CAS-No.	67-64-1
EC No.	200-662-2
REACH Registration No.	01-2119471330-49-XXXX

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

Identified uses: For Laboratory, Research or Manufacturing Use.

Uses advised against: Not determined.

1.3 Details of the supplier of the safety data sheet

Avantor Performance Materials Poland S.A.
Sowinskiego 11str., 44-101 Gliwice,
Poland

Telephone: 48 32 239-20-00
Fax: 48 32 239-23-70

Contact Person: Environmental Health & Safety

E-mail: export@avantormaterials.com

E-mail address of person responsible for this SDS: SDS@avantormaterials.com

1.4 Emergency telephone number: Chemtrec local numbers

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has been classified according to the legislation in force.

Classification according to Regulation (EC) No 1272/2008 as amended.

Physical Hazards

Flammable liquids	Category 2	H225: Highly flammable liquid and vapor.
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Health Hazards

Serious eye irritation	Category 2	H319: Causes serious eye irritation.
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Specific Target Organ Toxicity - Category 3 H336: May cause drowsiness or dizziness.
Single Exposure

2.2 Label Elements

Contains: Acetone



Signal Word: Danger

Hazard Statement(s): H225: Highly flammable liquid and vapor.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.

Target Organs:
Acetone narcotic effects

Precautionary Statements

Prevention: P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
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.
P312: Call a POISON CENTER/doctor if you feel unwell.
P337+P313: If eye irritation persists: Get medical advice/attention.
P370+P378: In case of fire: Use to extinguish.

Storage: P403+P233: Store in a well-ventilated place. Keep container tightly closed.

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.

Supplemental label information

EUH066: Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Concentration	CAS-No.	EC No.	REACH Registration No.	M-Factor:	Notes
Acetone	50 - <100%	67-64-1	200-662-2	01-2119471330-49-XXXX	No data available.	#

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by weight.
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volume.
This substance has workplace exposure limit(s).

SECTION 4: First aid measures

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

4.1 Description of 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.

4.2 Most important symptoms and effects, both acute and delayed: Narcotic effect.

4.3 Indication of any immediate medical attention and special treatment needed

Hazards: No data available.

Treatment: Symptoms may be delayed. Treat symptomatically.

SECTION 5: Firefighting measures

General Fire Hazards: Flammable liquid and vapor.

5.1 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.

5.2 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.

5.3 Advice 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.

SECTION 6: Accidental release measures

- 6.1 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.
- 6.2 Environmental Precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.
- 6.3 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.
- 6.4 Reference to other sections:** No data available.

SECTION 7: Handling and storage:

- 7.1 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.
- 7.2 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.
- 7.3 Specific end use(s):** No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
Acetone	TWA	500 ppm 1.210 mg/m ³	EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU (12 2009)
	STEL	1.000 ppm 2.420 mg/m ³	EU. Scientific Committee on Occupational Exposure Limit Values (SCOELs), European Commission - SCOEL (2014)
	TWA	500 ppm 1.210 mg/m ³	EU. Scientific Committee on Occupational Exposure Limit Values (SCOELs), European Commission - SCOEL (2014)
	TWA	500 ppm 1.210 mg/m ³	Malta. OELs. Protection of Health and Safety of Workers from Risks related to Chemical Agents at Work (L.N 227/2003, Schedules I and V) (2007)

DNEL-Values

Critical component	Type	Route of Exposure	Health Warnings	Remarks
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PNEC-Values

Critical component	Environmental compartment	PNEC-Values
Acetone	Soil	29,5 mg/kg
	Aquatic (marine water)	1,06 mg/l
	Sediment (freshwater)	30,4 mg/kg
	Sewage treatment plant	100 mg/l
	Sediment (marine water)	3,04 mg/kg
	Aquatic (freshwater)	10,6 mg/l

8.2 Exposure controls

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: Material: 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.

Environmental Controls: No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic 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)
- Freezing point:** -94,7 °C

Boiling Point:	56 °C (101,3 kPa)
Flash Point:	-20 °C (Closed Cup)
Evaporation Rate:	No data available.
Flammability (solid, gas):	Class IB Flammable Liquid
Flammability limit - upper (%):	12,8 %(V)
Flammability limit - lower (%):	2,6 %(V)
Vapor pressure:	30,9 kPa (25 °C) 233 - 240 hPa (20 °C) 530 - 560 hPa (40 °C)
Vapor density (air=1):	2
Density:	0,79 g/ml (20 °C)
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
Autoignition Temperature:	465 °C
Decomposition Temperature:	No data available.
Viscosity:	No data available.
Explosive properties:	No data available.
Oxidizing properties:	No data available.

9.2 Other information

Molecular weight:	58,08 g/mol (C ₃ H ₆ O)
VOC Content:	EC Directive 2004/42: 790 g/l ~100 % (calculated)
Minimum ignition energy:	1,15 mJ

SECTION 10: Stability and reactivity

10.1 Reactivity:	No data available.
10.2 Chemical Stability:	Material is stable under normal conditions.
10.3 Possibility of hazardous reactions:	Hazardous polymerization does not occur.
10.4 Conditions to avoid:	Heat, sparks, flames.
10.5 Incompatible Materials:	Oxidizers, acids
10.6 Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation:	None known or expected under normal use.
Skin Contact:	None known or expected under normal use.

Eye contact: Causes eye irritation.

Ingestion: No adverse effects due to ingestion are expected.

11.1 Information on toxicological effects

Acute toxicity

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.

Skin Corrosion/Irritation:

Product: Prolonged or repeated contact may cause irritation.

Serious Eye Damage/Eye Irritation:

Product: Irritating to eyes.

Respiratory or Skin Sensitization:

Product: Not a skin sensitizer.

Germ Cell Mutagenicity

In vitro

Product: No mutagenic components identified

In vivo

Product: No mutagenic components identified

Carcinogenicity

Product: This substance has no evidence of carcinogenic properties.

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:

Acetone narcotic effects

Aspiration Hazard

Product: May be harmful if swallowed and enters airways.

Other adverse effects: None known.

SECTION 12: Ecological information

12.1 Toxicity

Acute toxicity

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

Specified substance(s)

Acetone
LC 50 (Bleak (*Alburnus alburnus*), 96 h): 10.700 - 11.300 mg/l
LC 50 (Western mosquitofish (*Gambusia affinis*), 96 h): 13.000 mg/l
LC 50 (Rainbow trout, donaldson trout (*Oncorhynchus mykiss*), 96 h): 4.740 - 6.330 mg/l
LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 5.490 - 10.700 mg/l
LC 50 (Bluegill (*Lepomis macrochirus*), 96 h): 8.300 mg/l

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

Specified substance(s)

Acetone
LC 50 (Scud (*Gammarus pulex*), 48 h): 6.000 mg/l
LC 50 (Water flea (*Daphnia magna*), 48 h): 8.640 - 14.400 mg/l
EC 50 (Water flea (*Daphnia magna*), 48 h): 10.294 - 17.704 mg/l
LC 50 (Hydra (*Hydra oligactis*), 48 h): 13.500 mg/l
LC 50 (Oligochaete family (*Tubificidae*), 48 h): 15.000 mg/l

Chronic Toxicity

Fish

Product: No data available.

Specified substance(s)

Acetone No data available.

Aquatic Invertebrates

Product: No data available.

Specified substance(s)

Acetone
EC 50 (*Ceriodaphnia dubia*, 10 d): 5.908 - 6.928 mg/l (semi-static) Experimental result, Supporting study
EC 50 (*Daphnia magna*, 10 d): 6.369 - 6.714 mg/l (semi-static) Experimental result, Not specified
NOAEL (*Daphnia magna*, 10 d): 3.110 - 5.184 mg/l (semi-static) Experimental result, Not specified
NOAEL (*Daphnia magna*, 28 d): 2.212 mg/l (flow-through) Experimental result, Key study
LOAEL (*Daphnia magna*, 28 d): 2.212 mg/l (flow-through) Experimental result, Key study

Toxicity to Aquatic Plants

Product: No data available.

Specified substance(s)

Acetone No data available.

12.2 Persistence and Degradability

Biodegradation

Product: Expected to be readily biodegradable.

Specified substance(s)

Acetone No data available.

BOD/COD Ratio

Product No data available.

Specified substance(s)

Acetone No data available.

12.3 Bioaccumulative potential

Product: No data available on bioaccumulation.

Specified substance(s)

Acetone Bioconcentration Factor (BCF): 3 Aquatic sediment Estimated by calculation, Supporting study
Haddock, adult, Bioconcentration Factor (BCF): 0,69 Aquatic sediment
Experimental result, Not specified

12.4 Mobility in soil:

No data available.

Known or predicted distribution to environmental compartments

Acetone No data available.

12.5 Results of PBT and vPvB assessment:

Not available.

Acetone No data available.

12.6 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.

12.7 Additional Information:

No data available.

SECTION 13: Disposal considerations
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13.1 Waste treatment methods

General information: No data available.

Disposal methods: Discharge, treatment, or disposal may be subject to national, state, or local laws.

SECTION 14: Transport information
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ADR

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

14.6 Special precautions for user: Not determined.

RID

14.1 UN Number: UN 1090
 14.2 UN Proper Shipping Name: ACETONE
 14.3 Transport Hazard Class(es)
 Class: 3
 Label(s): 3
 14.4 Packing Group: II
 14.5 Environmental Hazards: No
 14.6 Special precautions for user: Not determined.

IMDG

14.1 UN Number: UN 1090
 14.2 UN Proper Shipping Name: ACETONE
 14.3 Transport Hazard Class(es)
 Class: 3
 Label(s): 3
 EmS No.: F-E, S-D
 14.4 Packing Group: II
 14.5 Environmental Hazards: No
 14.6 Special precautions for user: Not determined.

IATA

14.1 UN Number: UN 1090
 14.2 Proper Shipping Name: Acetone
 14.3 Transport Hazard Class(es):
 Class: 3
 Label(s): 3
 14.4 Packing Group: II
 14.5 Environmental Hazards: No
 14.6 Special precautions for user: Not determined.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: not applicable

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

EU Regulations

Regulation (EC) No. 2037/2000 Substances that deplete the ozone layer: none

Regulation (EC) No. 850/2004 on persistent organic pollutants: none

Regulation (EC) No. 689/2008 Import and export of dangerous chemicals: none

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended: none

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use:

Chemical name	CAS-No.	Concentration
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Acetone	67-64-1	100%
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Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.: none

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.: none

Directive 96/82/EC (Seveso III): on the control of major accident hazards involving dangerous substances:

Chemical name	CAS-No.	Concentration
Acetone	67-64-1	100%

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants: none

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:

Chemical name	CAS-No.	Concentration
Acetone	67-64-1	100%

15.2 Chemical safety assessment:

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Revision Information: Not relevant.

References

PBT PBT: persistent, bioaccumulative and toxic substance.
vPvB vPvB: very persistent and very bioaccumulative substance.

Key literature references and sources for data: No data available.

Wording of the H-statements in section 2 and 3

H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Training information: No data available.

Issue Date: 22.11.2017
SDS No.:

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