

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.	3413, 5276, 8002, 8003, 8142, 9254, 2435, 6776, P139, P113, 9005, 5008, 2440
Synonyms, Trade Names:	2-Propanone
Additional identification	
Chemical name:	Acetone
Chemical formula:	C3H6O
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: Product Information Compliance
E-mail: export@avantormaterials.com

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

1.4 Emergency telephone number: CHEMTREC: (44)-870-8200418

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 vapour.
-------------------	------------	---

Health Hazards

Serious eye irritation	Category 2	H319: Causes serious eye irritation.
------------------------	------------	--------------------------------------

Specific Target Organ Toxicity - Single Exposure	Category 3	H336: May cause drowsiness or dizziness.
--	------------	--

2.2 Label Elements

Contains: Acetone



Signal Word: Danger

Hazard Statement(s): H225: Highly flammable liquid and vapour.
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.
P233: Keep container tightly closed.
P261: Avoid breathing dust/fume/gas/mist/vapours/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 CENTRE/doctor if you feel unwell.
P337+P313: If eye irritation persists: Get medical advice/attention.

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 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 re-use. 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 doctor or poison control centre 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 vapour.
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:	Vapours may cause a flash fire or ignite explosively. Vapours may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapours 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 firefighters:	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 unauthorised 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. Dyke 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	UK. EH40 Workplace Exposure Limits (WELs) (2007)
	STEL	1.500 ppm 3.620 mg/m ³	UK. EH40 Workplace Exposure Limits (WELs) (2007)
	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)
	TWA	500 ppm 1.210 mg/m ³	EU. Scientific Committee on Occupational Exposure Limit Values (SCOELs), European Commission - SCOEL (2014)
	STEL	1.000 ppm 2.420 mg/m ³	EU. Scientific Committee on Occupational Exposure Limit Values (SCOELs), European Commission - SCOEL (2014)

DNEL-Values

Critical component	Type	Route of Exposure	Health Warnings	Remarks

PNEC-Values

Critical component	Environmental compartment	PNEC-Values
Acetone	Sediment (marine water)	3,04 mg/kg
	Aquatic (freshwater)	10,6 mg/l
	Soil	29,5 mg/kg
	Aquatic (marine water)	1,06 mg/l
	Sediment (freshwater)	30,4 mg/kg
	Sewage treatment plant	100 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 vapour 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 re-use. 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
Colour:	Colorless
Odour:	Characteristic
Odour Threshold:	No data available.
pH:	5 - 6 (20 °C)
Freezing point:	-94,8 - 94,6 °C
Boiling Point:	56 °C (101,3 kPa)
Flash Point:	-20 - -17 °C (Closed Cup)
Evaporation Rate:	No data available.
Flammability (solid, gas):	Class IB Flammable Liquid
Flammability limit - upper (%)	12,8 %(V)
Flammability limit - lower (%)	2,13 - 2,6 %(V)
Vapour pressure:	30,9 kPa (25 °C) 233 - 240 hPa (20 °C) 530 - 560 hPa (40 °C)
Vapour 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.
Oxidising 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 dangerous reaction known under conditions of normal use.
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:	Strong acids. Strong oxidising agents.
10.6 Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

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 serious 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 Sensitisation:	
Product:	Not a skin sensitiser.
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.
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 (Fathead minnow (*Pimephales promelas*), 96 h): 5.490 - 10.700 mg/l
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 (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

EC 50 (Water flea (*Daphnia magna*), 48 h): 10.294 - 23.900 mg/l
LC 50 (Water flea (*Daphnia magna*), 48 h): 8.640 - 14.400 mg/l
LC 50 (Hydra (*Hydra oligactis*), 48 h): 13.500 mg/l
LC 50 (Great pond snail (*Lymnaea stagnalis*), 48 h): 7.000 mg/l
LC 50 (Water flea (*Daphnia cucullata*), 48 h): 7.460 - 7.810 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

NOAEL (Ceriodaphnia dubia, 10 d): 5.184 mg/l
EC 50 (Ceriodaphnia dubia, 10 d): 5.908 - 6.928 mg/l
EC 50 (Daphnia magna, 10 d): 6.369 - 6.714 mg/l
NOAEL (Daphnia magna, 10 d): 3.110 - 5.184 mg/l

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
Haddock, adult, Bioconcentration Factor (BCF): 0,69 Aquatic sediment

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

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

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. 649/2012 Import and export of dangerous chemicals: none

Regulation (EC) No. 1907/2006 REACH Annex XIV Substance 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
Acetone	67-64-1	100%

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 2012/18/EU (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.

Inventory status:
ISHL (JP): On or in compliance with the inventory

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: 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.

Wording of the H-statements in sections 2 and 3

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

Training information: No data available.

Issue Date: 03.09.2020
SDS No.:

Disclaimer:

The information provided in this Safety Data Sheet (SDS) was prepared based on data believed to be accurate as of the date of this SDS. TO THE GREATEST EXTENT PERMITTED BY LAW, AVANTOR PERFORMANCE MATERIALS ("AVANTOR") EXPRESSLY DISCLAIMS ANY AND ALL REPRESENTATIONS AND WARRANTIES REGARDING THE INFORMATION CONTAINED HEREIN INCLUDING, WITHOUT LIMITATION, AS TO ACCURACY, COMPLETENESS, FITNESS FOR PURPOSE OR USE, MERCHANTABILITY, NON-INFRINGEMENT, PERFORMANCE, SAFETY, SUITABILITY AND STABILITY. This SDS is intended as a guide to the appropriate use, handling, storage and disposal of the product to which it relates by properly trained personnel, and is not intended to be comprehensive. Users of Avantor's products are advised to perform their own tests and to exercise their own judgment to determine the safety, suitability and appropriate use, handling, storage and disposal of each product and product combination for their own purposes and uses. TO THE GREATEST EXTENT PERMITTED BY LAW, AVANTOR DISCLAIMS LIABILITY FOR, AND BY USING AVANTOR'S PRODUCTS THE PURCHASER AGREES THAT UNDER NO CIRCUMSTANCES SHALL AVANTOR BE LIABLE FOR, SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGE OF ANY TYPE OR KIND, INCLUDING WITHOUT LIMITATION, FOR LOSS OF PROFITS, REPUTATIONAL DAMAGE, PRODUCT RECALL OR BUSINESS INTERRUPTION.