

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.10.2023

Version number 5

Revision: 18.10.2023

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

1.1 Product identifier

· **Trade name:** Acetone



· **Article number:** 45632

· **CAS Number:**

67-64-1

· **EC number:**

200-662-2

· **Index number:**

606-001-00-8

· **Registration number** 01-2119471330-49

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

· **Product category** PC21 Laboratory chemicals

· **Process category** PROC15 Use as laboratory reagent

· **Application of the substance / the mixture:** Laboratory chemicals

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

SERVA Electrophoresis GmbH

Carl-Benz-Str. 7

D-69115 Heidelberg

Tel.: +49/6221/13840-0

FAX: +49/6221/13840-10

msds.info@serva.de

· **Information department:** Product Safety Department Tel.: +49 6221 13840-35

· **1.4 Emergency telephone number:**

Emergency medical information in case of poisoning

Poison Information Centre Mainz-Tel: +49 (0) 6131 19240

(Counselling in German and English)

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008:**



GHS02

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008:**

The substance is classified and labelled according to the GB CLP regulation.

· **Hazard pictograms:** GHS02, GHS07

· **Signal word:** Danger

· **Hazard statements:**

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

(Contd. on page 2)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.10.2023

Version number 5

Revision: 18.10.2023

Trade name: Acetone

(Contd. of page 1)

· Precautionary statements

- P210 *Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*
- P240 *Ground and bond container and receiving equipment.*
- P243 *Take action to prevent static discharges.*
- P280 *Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.*
- 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.*

· Additional information:

EUH066 Repeated exposure may cause skin dryness or cracking.

· Labelling of packages where the contents do not exceed 125 ml

· Hazard pictograms GHS02, GHS07

· Signal word *Danger*

· Hazard statements *Void*

· Precautionary statements

- P210 *Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*
- P280 *Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.*
- 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.*

· 2.3 Other hazards**· Results of PBT and vPvB assessment:**

· PBT: PBT - Assessment not available.

· vPvB: vPvB - Assessment not available.

· Determination of endocrine-disrupting properties *No further relevant information available.*

SECTION 3: Composition/information on ingredients

· 3.1 Substances**· CAS No. Description:**

67-64-1 acetone

· Identification number(s):

· EC number: 200-662-2

· Index number: 606-001-00-8

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· After inhalation: *Supply fresh air; consult doctor in case of complaints.*

· After skin contact:

Wash off immediately with soap and water and rinse thoroughly. In case of complaints, consult a doctor.

· After eye contact:

Rinse opened eye for several minutes with running water. Remove contact lenses if possible and continue rinsing. Consult an ophthalmologist immediately.

· After swallowing:

Rinse out mouth immediately. Drink plenty of water and provide fresh air. Call a doctor immediately.

· 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.10.2023

Version number 5

Revision: 18.10.2023

Trade name: Acetone

(Contd. of page 2)

- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture:**
Flammable substance, vapours are heavier than air and spread on the ground. Vapours may accumulate in low-lying areas.
Vapours may form flammable and explosive mixtures with air.
In case of fire, formation of dangerous fire gases or vapours possible.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
Keep away from ignition sources
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up**
Dispose contaminated material as waste according to section 13.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling:** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:**
Protect against electrostatic charges.
Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
Store at dry places in tightly closed receptacles.
Keep away from heat sources.
- **Information about storage in one common storage facility:**
Store away from oxidising agents.
store away from acute toxic materials
Do not store together with flammable solids.
- **Further information about storage conditions:**
Store receptacle in a well ventilated area.
Keep container tightly closed.
- **7.3 Specific end use(s):** No further relevant information available.

GB

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.10.2023

Version number 5

Revision: 18.10.2023

Trade name: Acetone

(Contd. of page 3)

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Components with limit values that require monitoring at the workplace:**

67-64-1 acetone (80-100%)

WEL	Short-term value: 3620 mg/m ³ , 1500 ppm Long-term value: 1210 mg/m ³ , 500 ppm
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· **DNELs**

worker: acute - local effects, inhalation: 2420 mg/m³

worker: long-term exposition - systemic effects, inhalation: 1210 mg/m³

· **PNECs**

PNEC fresh water: 10,6 mg/l

PNEC fresh water sediment: 30,4 mg/kg

PNEC marine water: 1,06 mg/l

PNEC marine sediment: 3,04 mg/kg

PNEC soil: 29,5 mg/kg

PNEC sewage treatment plant: 100 mg/l

· **Additional information:** The lists that were valid during the creation were used as basis.

· **8.2 Exposure controls**

· **Appropriate engineering controls:** No further data; see section 7.

· **Individual protection measures, such as personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Store protective clothing separately.

Immediately remove all soiled and contaminated clothing

Avoid contact with the eyes and skin.

Wash hands before breaks and at the end of work.

· **Breathing equipment:**

Short term filter device:

Filter AX.

· **Hand protection:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves:**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Butyl rubber, BR

· **Eye/face protection:** Tightly sealed goggles.

· **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information:**

· **Physical state:**

Fluid

· **Colour:**

Colourless

(Contd. on page 5)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.10.2023

Version number 5

Revision: 18.10.2023

Trade name: Acetone

(Contd. of page 4)

· Odour:	Acetone-like
· Odour threshold:	Not determined.
· Melting point/freezing point:	-94 °C
· Boiling point or initial boiling point and boiling range:	56 °C
· Flammability:	Highly flammable liquid and vapour according to GB CLP Regulation (EU) No 1272/2008: Flam. Liq. 2 H225
· Lower and upper explosion limit:	
· Lower:	2 Vol %
· Upper:	13 Vol %
· Flash point:	<-17 °C
· Auto-ignition temperature:	465 °C
· Decomposition temperature:	No information available
· pH:	No information available
· Viscosity:	
· Kinematic viscosity:	No information available
· Dynamic viscosity:	No information available
· Solubility:	
· Water:	Fully miscible
· Partition coefficient n-octanol/water (log value):	No information available
· Vapour pressure at 20 °C:	245.3 hPa
· Density and/or relative density:	
· Density at 20 °C:	0.79 g/cm ³
· Relative density:	Not determined.

· 9.2 Other information	
· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety:	
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Molecular weight	58.08 g/mol

SECTION 10: Stability and reactivity

- **10.1 Reactivity:** No further relevant information available.
- **10.2 Chemical stability:**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions:**
violent reactions possible in contact with:
strong oxidising agents
strong reducing agents
Vapours can form flammable and explosive mixtures with air.
- **10.4 Conditions to avoid:** Avoid high temperatures, flames, sparks
- **10.5 Incompatible materials:** rubber, various plastic materials
- **10.6 Hazardous decomposition products:** In case of fire: see section 5

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	5,800 mg/kg (rat)
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(Contd. on page 6)

GB

Safety data sheet
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Version number 5

Revision: 18.10.2023

Trade name: Acetone

(Contd. of page 5)

Dermal	LD50	20,000 mg/kg (rabbit)
Inhalative	LC50/4h	76 mg/l (rat)
	LC50/96h	6,210 mg/l (<i>Pimephales promelas</i>) (OECD Test Guideline 203)
	EC50/0,5h (static)	61.15 mg/l (activated sludge) (OECD Test Guideline 209)

- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation:** Causes serious eye irritation.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** May cause drowsiness or dizziness.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards:**
- **Endocrine disrupting properties:** No relevant information available

SECTION 12: Ecological information

· 12.1 Toxicity:

· Aquatic toxicity:

NOEC (static)	530 mg/l (<i>Microcystis aeruginosa</i>) (DIN 38412)
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· 12.2 Persistence and degradability:

Biochemical oxygen demand (BOD), 5 d (IUCLID): 1,850 mg/g

Chemical oxygen demand (COD) (IUCLID): 2.070 mg/g

Biodegradability: 91 % in 28 d (OECD Test Guideline 301 B).

· **Other information:** The product is readily biodegradable.

· **12.3 Bioaccumulative potential:** Bioaccumulation potential is not expected.

· **12.4 Mobility in soil:** No further relevant information available.

· 12.5 Results of PBT and vPvB assessment:

· **PBT:** PBT - assessment not available.

· **vPvB:** vPvB - assessment not available.

· **12.6 Endocrine disrupting properties:** For information on endocrine disrupting properties see section 11.

· **12.7 Other adverse effects:**

· Additional ecological information:

· General notes:

Do not allow product to reach ground water, water course or sewage system.

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Dispose of in accordance with official regulations.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packagings:

· Recommendation:

Uncleaned packaging must be disposed of in the same way as the product in accordance with official regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

GB

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 18.10.2023


Version number 5

Revision: 18.10.2023

Trade name: Acetone

(Contd. of page 6)

SECTION 14: Transport information

· 14.1 UN number or ID number · ADR, IMDG, IATA	UN1090
· 14.2 UN proper shipping name · ADR · IMDG, IATA	1090 ACETONE ACETONE
· 14.3 Transport hazard class(es) · ADR, IMDG, IATA	 · Class: 3 Flammable liquids. · Label: 3
· 14.4 Packing group · ADR, IMDG, IATA	II
· 14.5 Environmental hazards · Marine pollutant:	No
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category	Warning: Flammable liquids. 33 F-E,S-D E
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category · Tunnel restriction code · Item:	2 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1090 ACETONE, 3, II

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I Substance is not listed.
- Seveso category P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t

(Contd. on page 8)

GB

Safety data sheet

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Trade name: Acetone

(Contd. of page 7)

- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 40, 75
 - **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
 - **REGULATION (EU) 2019/1148**
 - **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
Substance is not listed.
 - **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is listed.
 - **Regulation (EC) No 273/2004 on drug precursors 3**
 - **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
3
 - **National regulations:**
 - **Technical instructions (air):**
- | Class | Share in % |
|-------|------------|
| NK | 80-100 |
- **Water hazard class:** Water hazard class 1 (Assessment by list): slightly hazardous for water.
 - **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Product Safety Department
- **Contact:** +49 6221 13840-35
- **Date of previous version:** 23.06.2017
- **Abbreviations and acronyms:**
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 ICAO: International Civil Aviation Organisation
 PBT: persistent, bioaccumulative, toxic substance (UK REACH)
 vPvB: very persistent, very bioaccumulative substance (UK REACH)
 UK REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
 GB CLP: Regulation on classification, labelling and packaging of substances and mixtures
 bw: body weight
 ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 DNEL: Derived No-Effect Level (UK REACH)
 PNEC: Predicted No-Effect Concentration (UK REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Flam. Liq. 2: Flammable liquids – Category 2
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

GB