

## Safety Data Sheet

## Acetophenone-d8

Classification acc. to 29 CFR 1910.1200

Version number: GHS 1.1

Date of compilation: 2022-09-19

### SECTION 1: Identification

#### 1.1 Product identifier

Identification of the substance

**Acetophenone-d8**

CAS number

19547-00-3

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

Relevant identified uses

industrial uses  
the product is intended for research, analysis and scientific education  
scientific research and development  
product and process oriented research and development  
laboratory and analytical use  
feedstock use  
process agent use

#### 1.3 Details of the supplier of the safety data sheet

Zeochem AG  
Joweid 5, CH-8630 Rüti  
Switzerland

Telephone: +41 44 922 93 93:  
e-Mail: [Info@zeochem.com](mailto:Info@zeochem.com) / [info@zeochem.ch](mailto:info@zeochem.ch):  
Website: <https://www.zeochem.com>:

#### 1.4 Emergency telephone number

Poison center		
Country	Name	Telephone
Switzerland	Toxzentrum Zürich / Tox. Info Suisse	+41 44 251 51 51 / CH: 145 - 24h/7d
United States	CHEMTREC USA	+1 800 424 9300 - 24h/7d

### SECTION 2: Hazard(s) identification

#### 2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Category	Hazard class and category	Hazard statement
A.1O	acute toxicity (oral)	4	Acute Tox. 4	H302
A.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319

For full text of abbreviations: see SECTION 16.

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**2.2 Label elements**

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word warning

**2.2.1.2 Pictograms**

GHS07	
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**Hazard statements**

H302	harmful if swallowed
H319	causes serious eye irritation

**Precautionary statements**

P270	do not eat, drink or smoke when using this product
P280	wear eye protection/face protection
P301+P312	if swallowed: Call a poison center/doctor if you feel unwell
P305+P351+P338	if in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P330	rinse mouth
P337+P313	if eye irritation persists: Get medical advice/attention
P501	dispose of contents/container in accordance with local/regional/national/international regulations

**2.3 Other hazards**

Hazards not otherwise classified

May be harmful if swallowed (GHS category 5: acutely toxic - oral).

May be harmful in contact with skin (GHS category 5: acutely toxic - dermal).

Harmful to aquatic life with long lasting effects (GHS category 3: aquatic toxicity - acute and/or chronic).

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

**SECTION 3: Composition/information on ingredients****3.1 Substances**

Name of substance	Acetophenone-d8
Identifiers	
CAS No	19547-00-3
Molecular formula	C8D8O
Molar mass	128 g/mol

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### SECTION 4: First-aid measures

#### 4.1 Description of first-aid measures

##### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

##### Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

##### Following skin contact

Wash with plenty of soap and water.

##### Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

##### Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

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

Symptoms and effects are not known to date.

#### 4.3 Indication of any immediate medical attention and special treatment needed

none

### SECTION 5: Fire-fighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO<sub>2</sub>)

##### Unsuitable extinguishing media

Water jet

#### 5.2 Special hazards arising from the substance or mixture

##### Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

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### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

#### 6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

#### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Recommendations

Store in a dry place.

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

#### 7.2 Conditions for safe storage, including any incompatibilities

#### 7.3 Specific end use(s)

See section 16 for a general overview.

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## SECTION 8: Exposure controls/personal protection

## 8.1 Control parameters

## Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
US	acetophenone	98-86-2	PEL (CA)	10	49						Cal/ OSHA PEL
US	acetophenone	98-86-2	TLV <sup>®</sup>	10							ACGIH <sup>®</sup> 2022

## Notation

## Ceiling-C

## STEL

## TWA

ceiling value is a limit value above which exposure should not occur

short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours  
time-weighted average (unless otherwise specified)

## Human health values

## Relevant DNELs and other threshold levels

Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	22 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	6.3 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

## Environment values

## Relevant PNECs and other threshold levels

Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
PNEC	0.086 mg/l	aquatic organisms	freshwater	short-term (single instance)
PNEC	0.009 mg/l	aquatic organisms	marine water	short-term (single instance)
PNEC	34.6 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	1.13 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	0.113 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
PNEC	0.175 mg/kg	terrestrial organisms	soil	short-term (single instance)

## 8.2 Exposure controls

## Appropriate engineering controls

General ventilation.

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### Individual protection measures (personal protective equipment)

#### Eye/face protection

Wear eye/face protection.

#### Skin protection

##### - Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

##### - Type of material

Nitrile

IIR: isobutene-isoprene (butyl) rubber

##### - Breakthrough times of the glove material

>30 minutes (permeation: level 2)

##### - Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

#### Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state	liquid
Color	not determined
Particle	not relevant (liquid)
Odor	characteristic

#### Other safety parameters

pH (value)	not determined
Melting point/freezing point	20 °C
Initial boiling point and boiling range	202 °C
Flash point	105 °C closed cup

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Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)

### Explosive limits

- Lower explosion limit (LEL)	1.4 vol%
- Upper explosion limit (UEL)	5.2 vol%

Vapor pressure	45 Pa at 25 °C
Density	1.1 g/cm <sup>3</sup> at 20 °C
Vapor density	this information is not available

### Solubility(ies)

- Water solubility	6,300 mg/l at 25 °C
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### Partition coefficient

- n-octanol/water (log KOW)	1.63 (ECHA)
- Soil organic carbon/water (log KOC)	0.973 (ECHA)

Auto-ignition temperature	76 °C
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### Viscosity

- Dynamic viscosity	1.68 mPa s at 25 °C
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Explosive properties	none
Oxidizing properties	none

## 9.2 Other information

Surface tension	39 mN/m (25 °C) (ECHA)
Refractive index	1.53 (20 °C)

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### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

#### 10.2 Chemical stability

See below "Conditions to avoid".

#### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

#### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

#### 10.5 Incompatible materials

Oxidizers

#### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

##### Acute toxicity

Harmful if swallowed.

GHS of the United Nations, annex 4: May be harmful in contact with skin.

##### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

##### Serious eye damage/eye irritation

Causes serious eye irritation.

##### Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

##### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

##### Carcinogenicity

Shall not be classified as carcinogenic.

##### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

##### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

##### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

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Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

### SECTION 12: Ecological information

#### 12.1 Toxicity

Harmful to aquatic life with long lasting effects.

Aquatic toxicity (acute)			
Endpoint	Value	Species	Exposure time
LC50	162 mg/l	fish	96 h
EC50	162 mg/l	fish	96 h
ErC50	86.4 mg/l	algae	72 h

#### 12.2 Persistence and degradability

Process of degradability		
Process	Degradation rate	Time
oxygen depletion	64.7 %	14 d
DOC removal	<30 %	28 d

#### 12.3 Bioaccumulative potential

Data are not available.

n-octanol/water (log KOW)	1.63 (ECHA)
BCF	0.475 (ECHA)

#### 12.4 Mobility in soil

Henry's law constant	0.766 Pa m <sup>3</sup> /mol at 20 °C
The Organic Carbon normalised adsorption coefficient	0.973 (ECHA)

#### 12.5 Results of PBT and vPvB assessment

Data are not available.

#### 12.6 Endocrine disrupting properties

Not listed.

#### 12.7 Other adverse effects

Data are not available.

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### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

#### Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

### SECTION 14: Transport information

#### 14.1 UN number

ICAO-TI UN 3334

#### 14.2 UN proper shipping name

ICAO-TI Aviation regulated liquid, n.o.s. (Acetophenone)

#### 14.3 Transport hazard class(es)

ICAO-TI 9

#### 14.4 Packing group

ICAO-TI III

#### 14.5 Environmental hazards

non-environmentally hazardous acc. to the dangerous goods regulations

#### 14.6 Special precautions for user

There is no additional information.

#### 14.7 Transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

#### Information for each of the UN Model Regulations

##### Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information

Not subject to transport regulations.

##### International Maritime Dangerous Goods Code (IMDG) - Additional information

Not subject to IMDG.

##### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Danger label(s) 9



Special provisions (SP) A27

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Excepted quantities (EQ)	E1
Limited quantities (LQ)	30 kg

### SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations specific for the product in question

##### National regulations (United States)

**Toxic Substance Control Act (TSCA)** substance is listed as "ACTIVE"

##### Superfund Amendment and Reauthorization Act (SARA TITLE III )

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

not listed

- Specific Toxic Chemical Listings (EPCRA Section 313)

Toxics Release Inventory: Specific Toxic Chemical Listings

Name of substance	CAS No	Remarks	Effective date
Acetophenone-d8	98-86-2		1994-01-01

##### Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Name of substance	CAS No	Remarks	Statutory code	Final RQ pounds (Kg)
Acetophenone-d8	98-86-2		3 4	5000 (2270)

##### Legend

3 "3" indicates that the source is section 112 of the Clean Air Act

4 "4" indicates that the source is section 3001 of the Resource Conservation and Recovery Act (RCRA)

##### Clean Air Act

not listed

##### Right to Know Hazardous Substance List

- Cleaning Product Right to Know Act Substance List (CA-RTK)

Name of substance	CAS No	Functionality	Authoritative Lists
Acetophenone-d8	98-86-2		CA TACs

- Toxic or Hazardous Substance List (MA-TURA)

Name of substance	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Threshold	De Minimis Concentration Threshold
Acetophenone-d8	98-86-2				1.0 %

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### - Hazardous Substances List (MN-ERTK)

Name of substance	CAS No	References	Remarks
Acetophenone-d8	98-86-2	A, I	

#### Legend

A American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1992-93", available from ACGIH  
I American Industrial Hygiene Association (AIHA), "Workplace Environmental Exposure Level Guides" (1992), available from AIHA

### - Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
Acetophenone-d8	98-86-2		F2

#### Legend

F2 Flammable - Second Degree

### - Hazardous Substance List (Chapter 323) (PA-RTK)

Name acc. to inventory	CAS No	Classification
ETHANONE, 1-PHENYL-	98-86-2	E

#### Legend

E Environmental hazard

### - Hazardous Substance List (RI-RTK)

Name of substance	CAS No	References
Acetophenone-d8	98-86-2	F

#### Legend

F Flammability (NFPA®)

### California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

not listed

### Industry or sector specific available guidance(s)

#### NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	/	none
Health	2	temporary or minor injury may occur
Flammability	1	material that must be preheated before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive

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Category	Rating	Description
Personal protection	-	

### NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	1	material that must be preheated before ignition can occur
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

### National inventories

Country	Inventory	Status
EU	REACH Reg.	substance is listed
US	TSCA	substance is listed

#### Legend

REACH Reg. REACH registered substances  
TSCA Toxic Substance Control Act

## 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

## SECTION 16: Other information, including date of preparation or last revision

### Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
1.2	Relevant identified uses: industrial uses the product is intended for research, analysis and scientific education scientific research and development product and process orientated research and development laboratory and analytical use feedstock use process agent use	Relevant identified uses: industrial uses the product is intended for research, analysis and scientific education scientific research and development product and process orientated research and development laboratory and analytical use feedstock use process agent use	yes
11.1	Acute toxicity: Harmful if swallowed.GHS of the United Nations, annex 4:	Acute toxicity: Harmful if swallowed.GHS of the United Nations, annex 4: May be harmful in contact with skin.	yes
15.1	Toxic Substance Control Act (TSCA): substance is listed	Toxic Substance Control Act (TSCA): substance is listed as "ACTIVE"	yes

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**Key literature references and sources for data**

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

**List of relevant phrases (code and full text as stated in section 2 and 3)**

Code	Text
H302	Harmful if swallowed.
H319	Causes serious eye irritation.

**Disclaimer**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.