

## Safety Data Sheet

## N,N-dimethylacetamide-d9

According to Regulation (EC) No. 1907/2006 (REACH)

Version number: GHS 2.1  
Replaces version of: 2021-06-28 (GHS 1)

Revision: 2023-02-02

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

#### 1.1 Product identifier

Identification of the substance	<b>N,N-dimethylacetamide-d9</b>
Registration number (REACH)	this information is not available
CAS number	116057-81-9

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

Zeochem AG Joweid 5, CH-8630 Rütli Switzerland	Telephone: +41 44 922 93 93 e-Mail: info@zeochem.com / info@zeochem.ch Website: https://www.zeochem.com
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#### 1.4 Emergency telephone number

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Section	Hazard class	Category	Hazard class and category	Hazard statement
3.1D	acute toxicity (dermal)	4	Acute Tox. 4	H312
3.1I	acute toxicity (Inhal.)	4	Acute Tox. 4	H332
3.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319
3.7	reproductive toxicity	1B	Repr. 1B	H360D

For full text of abbreviations: see SECTION 16.

#### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

- Signal word danger

##### 2.2.1.2 Pictograms

GHS07, GHS08	 
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Hazard statements	
H312+H332	harmful in contact with skin or if inhaled
H319	causes serious eye irritation
H360D	may damage the unborn child

  

Precautionary statements	
P201	obtain special instructions before use
P261	avoid breathing dust/fume/gas/mist/vapours/spray
P280	wear protective gloves/protective clothing/eye protection/face protection/hearing protection
P312	call a POISON CENTRE/doctor if you feel unwell
P321	specific treatment (see on this label)
P501	dispose of contents/container in accordance with local/regional/national/international regulations

### 2.3 Other hazards

This material is combustible, but will not ignite readily.

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	N,N-dimethylacetamide-d9
Identifiers	
CAS No	116057-81-9
Purity	≥97 %

Specific Conc. Limits	M-Factors	ATE	Exposure route
-	-	1,100 mg/kg 11 mg/l/4h	dermal inhalation: vapour

Molecular formula	C4D9NO
Molar mass	96.2 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: Firefighting 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

Nitrogen oxides (NO<sub>x</sub>), 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. Co-ordinate 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 vapours/dust/spray/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**

- Ventilation requirements

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted.

**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
DE	N,N-dimethylacetamide	127-19-5	MAK	5	18	10	36			H	DFG
DE	N,N-dimethylacetamide	127-19-5	AGW	5	18	10	36			H, Y	TRGS 900
ES	N,N-dimethylacetamide	127-19-5	VLA	10	36	20	72			H	INSHT
EU	N,N-dimethylacetamide	127-19-5	IOELV	10	36	20	72			H	2022/431/EU
FR	N,N-dimethylacetamide	127-19-5	VME	2	7.2	10	36			H	INRS
IT	N,N-dimethylacetamide	127-19-5	VLEP	10	36	20	72			H	G.U. n. 218 - Allegato XXXVIII

#### Notation

##### Ceiling-C

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

##### H

absorbed through the skin

##### STEL

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)

##### TWA

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

##### Y

a risk of developmental toxicity does not need to be expected if the occupational exposure limit value and the biological limit value (BGW) are adhered to

Biological limit values						
Country	Name of agent	Parameter	Notation	Identifier	Value	Source
DE	N,N-dimethylacetamide	N-methylacetamide, N-(hydroxymethyl)-N-methylacetamide		BAT	25 mg/l	DFG
DE	N,N-dimethylacetamide	N-methylacetamide plus N-hydroxymethyl-N-methylacetamide		BLV	25 mg/l	TRGS 903
ES	N,N-dimethylacetamide	N-methylacetamide	crea	VLB	30 mg/g	INSHT

#### Notation

##### crea

creatinine

#### 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

Physical state	liquid
Colour	colourless
Odour	characteristic
Melting point/freezing point	-20 °C
Boiling point or initial boiling point and boiling range	165 – 167 °C
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	1.8 vol% - 11.5 vol%
Flash point	64 °C at 1,013 hPa (closed cup)
Auto-ignition temperature	345 °C at 1,011 hPa (ECHA)

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Decomposition temperature	not relevant
pH (value)	not determined
Kinematic viscosity	0.893 mm <sup>2</sup> /s at 25 °C

### Solubility(ies)

Water solubility	>1,000 g/l at 20 °C
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### Partition coefficient

Partition coefficient n-octanol/water (log value)	-0.77 (25 °C) (ECHA)
Soil organic carbon/water (log KOC)	1.46 (ECHA)

Vapour pressure	2 hPa at 21.7 °C
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### Density and/or relative density

Density	1.03 g/cm <sup>3</sup>
Relative vapour density	information on this property is not available

Particle characteristics	not relevant (liquid)
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## 9.2 Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
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### Other safety characteristics

Temperature class (EU, acc. to ATEX)	T2 (maximum permissible surface temperature on the equipment: 300°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

Oxidisers

#### 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 hazard classes as defined in Regulation (EC) No 1272/2008

##### Classification according to GHS (1272/2008/EC, CLP)

##### Acute toxicity

Harmful in contact with skin. Harmful if inhaled.

##### - Acute toxicity estimate (ATE)

Dermal	1,100 mg/kg
Inhalation: vapour	11 mg/l/4h

##### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

##### Serious eye damage/eye irritation

Causes serious eye irritation.

##### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

##### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

##### Carcinogenicity

Shall not be classified as carcinogenic.

##### Reproductive toxicity

May damage the unborn child.

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

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



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

Aspiration hazard  
Shall not be classified as presenting an aspiration hazard.

### 11.2 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

### 12.2 Persistence and degradability

Process of degradability		
Process	Degradation rate	Time
oxygen depletion	8.7 %	1 d

### 12.3 Bioaccumulative potential

Data are not available.

n-octanol/water (log KOW)	-0.77 (25 °C) (ECHA)
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### 12.4 Mobility in soil

Henry's law constant	0.001 Pa m <sup>3</sup> /mol at 25 °C
The Organic Carbon normalised adsorption coefficient	1.46 (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/packagings

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

<b>14.1 UN number or ID number</b>	not subject to transport regulations
<b>14.2 UN proper shipping name</b>	not relevant
<b>14.3 Transport hazard class(es)</b>	none
<b>14.4 Packing group</b>	not assigned
<b>14.5 Environmental hazards</b>	non-environmentally hazardous acc. to the dangerous goods regulations
<b>14.6 Special precautions for user</b>	There is no additional information.
<b>14.7 Maritime transport in bulk according to IMO instruments</b>	The cargo is not intended to be carried in bulk.

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

##### **Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information**

Not subject to ADR, RID and ADN.

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

Not subject to IMDG.

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

Not subject to ICAO-IATA.

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**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Relevant provisions of the European Union (EU)****Restrictions according to REACH, Annex XVII**

Dangerous substances with restrictions (REACH, Annex XVII)			
Name of substance	Name acc. to inventory	CAS No	No
N,N-dimethylacetamide-d9	N,N-dimethylacetamide (DMAc)	127-19-5	72
N,N-dimethylacetamide-d9	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		3
N,N-dimethylacetamide-d9	toxic for reproduction		30
N,N-dimethylacetamide-d9	substances in tattoo inks and permanent make-up		75

**List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list**

Substance of Very High Concern (SVHC)			
Name acc. to inventory	CAS No	Listed in	Remarks
N,N-dimethylacetamide	127-19-5	Candidate list	Repr. A57c

Legend

candidate list    Substances meeting the criteria referred to in Article 57 and for eventual inclusion in Annex XIV  
 Repr. A57c        Toxic for reproduction (article 57c)

**Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)**

not listed

**Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)**

not listed

**Water Framework Directive (WFD)**

List of pollutants (WFD)			
Name of substance	CAS No	Listed in	Remarks
N,N-dimethylacetamide-d9		a)	

Legend

A)                    Indicative list of the main pollutants

**Regulation on persistent organic pollutants (POP)**

Not listed.

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## 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

## Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). 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
H312	Harmful in contact with skin.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H360D	May damage the unborn child.

## Disclaimer

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