

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

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

- **1.1 Product identifier**
- **Trade name:** N,N-dimethylformamide
- **Chemical Identification:**  
dimethyl formamide  
N, N-dimethylformamide
- **Article number:** 0419
- **CAS Number:**  
68-12-2
- **EC number:**  
200-679-5
- **Index number:**  
616-001-00-X
- **Registration number** 01-2119475605-32-XXXX
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
Only for the use of professionals users
- **Life cycle stages**  
IS Use at industrial Sites  
M Manufacture  
F Formulation or re-packing  
PW Widespread use by professional workers
- **Sector of Use**  
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites  
SU9 Manufacture of fine chemicals  
SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)  
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)  
SU24 Scientific research and development
- **Product category**  
PC19 Intermediate  
PC21 Laboratory chemicals
- **Process category**  
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.  
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions  
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition  
PROC4 Chemical production where opportunity for exposure arises  
PROC5 Mixing or blending in batch processes  
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities  
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)  
PROC15 Use as laboratory reagent
- **Environmental release category**  
ERC2 Formulation into mixture  
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)  
ERC6a Use of intermediate
- **Application of the substance / the mixture**  
Chemical for research, development, manufacturing, laboratory chemical for analysis.

(Contd. on page 2)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

**Trade name: N,N-dimethylformamide**

(Contd. of page 1)

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

#### · **Manufacturer/Supplier:**

Biosolve Chimie

20 Rue Roger Husson, 57260 Dieuze, France

Tel: +33 3 878 675 80/81/82/83/84/85

Email: [info@biosolvechimie.com](mailto:info@biosolvechimie.com)

Biosolve B.V.

Leenderweg 78, 5555 CE Valkenswaard, the Netherlands.

Tel: +31-(0)40-2071300

Fax: +31-(0)40-2048537

Email: [info@biosolve-chemicals.com](mailto:info@biosolve-chemicals.com)

#### · **Further information obtainable from:** Product safety department.

### · 1.4 Emergency telephone number:

Contact list of appointed bodies for information relating to emergency health response, according to Art. 45(1) Reg. (EC) No 1272/2008.

See below section 16 or at <https://poisoncentres.echa.europa.eu/home>.

Help desk: <http://echa.europa.eu/web/guest/support/helpdesks/national-helpdesks/list-of-national-helpdesks>.

Data from: ECHA - EUROPEAN CHEMICALS AGENCY

For more information see section 16.

## SECTION 2: Hazards identification

### · 2.1 Classification of the substance or mixture

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



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

Carc. 1B H350 May cause cancer.

Repr. 1B H360D May damage the unborn child.



GHS07

Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

Eye Irrit. 2 H319 Causes serious eye irritation.

(Contd. on page 3)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

**Trade name:** *N,N*-dimethylformamide

(Contd. of page 2)

#### · 2.2 Label elements

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

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

##### · Hazard pictograms



GHS02   GHS07   GHS08

##### · Signal word Danger

##### · Hazard statements

H226      Flammable liquid and vapour.

H312+H332   Harmful in contact with skin or if inhaled.

H319      Causes serious eye irritation.

H350      May cause cancer.

H360D      May damage the unborn child.

##### · Precautionary statements

P210      Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241      Use explosion-proof [electrical/ventilating/lighting] equipment.

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.

P405      Store locked up.

P501      Dispose of contents/container in accordance with local/regional/national/international regulations.

##### · Additional information:

Restricted to professional users.

##### · 2.3 Other hazards

##### · Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

#### · 3.1 Substances

##### · CAS No. Description

CAS: 68-12-2 *N,N*-dimethylformamide

##### · Identification number(s)

· **EC number:** 200-679-5

· **Index number:** 616-001-00-X

(Contd. on page 4)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

**Trade name:** *N,N*-dimethylformamide

(Contd. of page 3)

· **SVHC**

CAS: 68-12-2 | *N,N*-dimethylformamide

#### SECTION 4: First aid measures

##### · 4.1 Description of first aid measures

###### · **General information:**

Seek immediate medical advice.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

###### · **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

###### · **After skin contact:** Generally the product does not irritate the skin.

###### · **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

###### · **After swallowing:** Rinse mouth with water.

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

No further relevant information available.

##### · 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:**

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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

No further relevant information available.

##### · 5.3 Advice for firefighters

###### · **Protective equipment:** Mouth respiratory protective device.

#### SECTION 6: Accidental release measures

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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

Wear protective equipment. Keep unprotected persons away.

##### · 6.2 Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

(Contd. on page 5)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

**Trade name: N,N-dimethylformamide**

(Contd. of page 4)

- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to section 13.  
Ensure adequate ventilation.
- **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** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

**CAS: 68-12-2 N,N-dimethylformamide**

BOELV	Short-term value: 30 mg/m <sup>3</sup> , 10 ppm Long-term value: 15 mg/m <sup>3</sup> , 5 ppm Skin
IOELV	Short-term value: 30 mg/m <sup>3</sup> , 10 ppm Long-term value: 15 mg/m <sup>3</sup> , 5 ppm Skin

- **DNELs**  
68-12-2  
Workers Skin contact Acute systemic effects 26.3mg/kg BW/d  
Workers Inhalation Acute systemic effects 30 mg/m<sup>3</sup>  
Workers Skin contact Long-term systemic effects 3.31mg/kg BW/d  
Workers Inhalation Long-term systemic effects 15 mg/m<sup>3</sup>  
Workers Inhalation Long-term local effects 15 mg/m<sup>3</sup>  
Workers Inhalation Acute local effects 30 mg/m<sup>3</sup>
- **PNECs**  
68-12-2  
Water 30 mg/l

(Contd. on page 6)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

**Trade name: N,N-dimethylformamide**

(Contd. of page 5)

Soil 16.235 mg/kg

Marine water 3 mg/kg

Fresh water 30 mg/l

Fresh water sediment 25.05 mg/kg

Onsite sewage treatment plant 123 mg/l

· **Additional information:** The lists valid during the making 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.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Hand protection**

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



Protective gloves

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

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.

· **Eye/face protection**


Tightly sealed goggles

EU

(Contd. on page 7)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

Trade name: N,N-dimethylformamide

(Contd. of page 6)

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

##### General Information

Physical state	Fluid
Colour:	Colourless
Odour:	Amine-like
Odour threshold:	No data available.
Melting point/freezing point:	-61 °C
Boiling point or initial boiling point and boiling range	152.5-153.5 °C
Flammability	Flammable.
Lower and upper explosion limit	
Lower:	2.2 Vol %
Upper:	16 Vol %
Flash point:	58 °C
Auto-ignition temperature:	440 °C
Decomposition temperature:	No data available
pH	No data available
Viscosity:	
Dynamic at 20 °C:	0.802 mPas
Solubility	
water:	Fully miscible.
Partition coefficient n-octanol/water (log value)	No data available
Vapour pressure at 20 °C:	3.5 hPa
Density and/or relative density	
Density at 20 °C:	0.95 g/cm <sup>3</sup>
Relative density	No data available
Vapour density	No data available

#### 9.2 Other information

Appearance:	
Form:	Liquid
Important information on protection of health and environment, and on safety.	
Ignition temperature:	No data available
Explosive properties:	Not determined.
Molecular weight	73.1 g/mol
Change in condition	
Evaporation rate	No data available

#### Information with regard to physical hazard classes

Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Flammable liquid and vapour.

(Contd. on page 8)



## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

**Trade name:** N,N-dimethylformamide

(Contd. of page 7)

- |  |      |
|--|------|
| · <b>Flammable solids</b>  | Void |
| · <b>Self-reactive substances and mixtures</b>                                     | Void |
| · <b>Pyrophoric liquids</b>  | Void |
| · <b>Pyrophoric solids</b>   | Void |
| · <b>Self-heating substances and mixtures</b>                                      | Void |
| · <b>Substances and mixtures, which emit flammable gases in contact with water</b> | Void |
| · <b>Oxidising liquids</b>   | Void |
| · <b>Oxidising solids</b>  | Void |
| · <b>Organic peroxides</b>   | Void |
| · <b>Corrosive to metals</b>   | Void |
| · <b>Desensitised explosives</b>   | Void |

### 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** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Harmful in contact with skin or if inhaled.

#### · **LD/LC50 values relevant for classification:**

Oral	LD50	2,800 mg/kg (rat)
Dermal	LD50	4,720 mg/kg (rabbit)
Inhalative	LC50/4 h	9,400 mg/l (mouse)

- **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** May cause cancer.
- **Reproductive toxicity** May damage the unborn child.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **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.

(Contd. on page 9)



## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

**Trade name:** N,N-dimethylformamide

(Contd. of page 8)

- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
- The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
- Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water
- Do not allow product to reach ground water, water course or sewage system.
- Danger to drinking water if even small quantities leak into the ground.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
- Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **European waste catalogue**

HP3	Flammable
HP4	Irritant - skin irritation and eye damage
HP6	Acute Toxicity
HP7	Carcinogenic
HP10	Toxic for reproduction

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

- **14.1 UN number or ID number**
- **ADR, IMDG, IATA** UN2265

(Contd. on page 10)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

Trade name: *N,N*-dimethylformamide

(Contd. of page 9)

· **14.2 UN proper shipping name**

· **ADR**

UN2265 *N,N*-DIMETHYLFORMAMIDE

· **IMDG, IATA**
*N,N*-DIMETHYLFORMAMIDE

· **14.3 Transport hazard class(es)**

· **ADR**

· **Class**

3 (F1) Flammable liquids.

· **Label**

3

· **IMDG, IATA**

· **Class**

3 Flammable liquids.

· **Label**

3

· **14.4 Packing group**

· **ADR, IMDG, IATA**

III

· **14.5 Environmental hazards:**

· **Marine pollutant:**

No

· **14.6 Special precautions for user**

Warning: Flammable liquids.

· **Hazard identification number (Kemler code):**

30

· **EMS Number:**

F-E,S-D

· **Stowage Category**

A

· **14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **Transport category**

3

· **Tunnel restriction code**

D/E

· **IMDG**

· **Limited quantities (LQ)**

5L

(Contd. on page 11)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

**Trade name:** N,N-dimethylformamide

(Contd. of page 10)

· **Exempted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

### 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

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 30, 40, 72, 76

· **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 not listed.

· **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

Substance is not listed.

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

CAS: 68-12-2 | N,N-dimethylformamide

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has 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:**

Austria German Vergiftungsinformationszentrale 01 406 43 43 <http://www.goeg.at/de/VIZ>

Belgium French Centre antipoison 070 245 245 <http://www.centreantipoisons.be>

Dutch Antigif centrum 070 245 245 <http://www.antigifcentrum.be>

(Contd. on page 12)

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

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

**Trade name: N,N-dimethylformamide**

(Contd. of page 11)

German Giftinformationszentrum 070 245 245 <http://www.poisoncentre.be>  
 Bulgaria\* Bulgarian Токсикологични центрове 02 9154 411 <https://pirogov.eu/bg>  
 Croatia\* Croatian Centar za kontrolu otrovanja +385 1 2348 342 <https://www.imi.hr/en/jedinica/poison-control-centre>  
 Czech Rep Czech Toxikologické informační středisko +420 224 91 92 93; +420 224 91 54 02 <http://www.tis-cz.cz>  
 Denmark Danish Giftlinien +45 8212 1212 <https://www.bispebjerghospital.dk/giftlinien>  
 Estonia Estonian Mürgistusteabekeskus 16662; +372 7943 794 <https://www.16662.ee>  
 Finland Finnish Myrkytystietokeskus 0800 147 111; +358 9 471 977 <http://www.hus.fi/sairaanhoito/sairaanhoitopalvelut/myrkytystietokeskus/Sivut/default.aspx>  
 France French Angers +33 2 41 48 21 21 <http://www.centres-antipoison.net/angers/index.html>  
 Bordeaux +33 5 56 96 40 80 <http://www.centres-antipoison.net/bordeaux/index.html>  
 Lille +33 0800 59 59 59 <http://www.centres-antipoison.net/lille/index.html>  
 Lyon +33 4 72 11 69 11 <http://www.centres-antipoison.net/lyon/index.html>  
 Marseille +33 4 91 75 25 25 <http://www.centres-antipoison.net/marseille/index.html>  
 Nancy +33 3 83 22 50 50 <http://www.centres-antipoison.net/nancy/index.html>  
 Paris +33 1 40 05 48 48 <http://www.centres-antipoison.net/paris/index.html>  
 Strasbourg +33 3 88 37 37 37 <http://www.centres-antipoison.net/strasbourg/index.html>  
 Toulouse +33 5 61 77 74 47 <http://www.centres-antipoison.net/toulouse/index.html>  
 Germany German Berlin +49 30 19240 <https://giftnotruf.charite.de>  
 Bonn +49 228 19240 <http://www.gizbonn.de/index.php?id=272>  
 Erfurt +49 361 730730 <https://www.ggiz-erfurt.de/home.html>  
 Freiburg +49 761 19240 <https://www.uniklinik-freiburg.de/giftberatung.html>  
 Göttingen +49 551 19240 <https://www.giz-nord.de/cms/index.php>  
 Homburg/Saar +49 6841 19240 [http://www.uniklinikumsaarland.de/de/einrichtungen/kliniken\\_institute/kinder\\_und\\_jugendmedizin/informations\\_und\\_behandlungszentrum\\_fuer\\_vergiftungen\\_des\\_saarlandes](http://www.uniklinikumsaarland.de/de/einrichtungen/kliniken_institute/kinder_und_jugendmedizin/informations_und_behandlungszentrum_fuer_vergiftungen_des_saarlandes)  
 Mainz +49 6131 19240 <http://www.giftinfo.uni-mainz.de/index.php?id=24807>  
 München +49 89 19240 <http://www.toxinfo.med.tum.de>  
 Greece Greek κέντρο δηλητηριάσεων +30 213 200 9000 <http://www.aglaiakyriakou.gr/>; <http://0317.syzefxis.gov.gr>  
 Hungary Hungarian Egészségügyi Toxikológiai Tájékoztató Szolgálat +36 6 80 20 11 99; +36 06 1 476 6464 <http://www.okbi.hu/page.php?trid=1&dz=103>  
 Italy Italian Bergamo +39 800 88 33 00 [http://www.asst-pg23.it/section/259/Tossicologia\\_-\\_Centro\\_antiveleni](http://www.asst-pg23.it/section/259/Tossicologia_-_Centro_antiveleni)  
 Firenze +39 55 794 78 19 <http://www.antiveleni.altervista.org>  
 Milano +39 2 661 01 029 <http://www.centroantiveleni.org>  
 Pavia +39 382 244 44 <http://www-3.unipv.it/reumatologia-tossicologia/cav>  
 Napoli +39 81 747 28 70  
 Foggia +39 881 732 326  
 Roma +39 6 685 93 726 / +39 6 499 78 000 / +39 6 305 43 43 <http://www.corso-primo-soccorso-roma.it/centri%20antiveleno-lazio.html>  
 Ireland English Poisons information Centre of Ireland +353 1 809 21 66 <http://www.poisons.ie/Public>  
 Latvia\* Latvian Saindēšanās informācijas centri +371 670 00 610 <https://www.aslimnica.lv/lv>  
 Russian Латвия +371 67000610 <https://www.aslimnica.lv/lv>  
 Lithuania Lithuanian Apsinuodijimų informacijos biuras + 370 5 236 20 52 <http://www.apsinuodijau.lt>  
 Luxembourg German Giftinformationszentrum +49 800 255 00 <http://www.poisoncentre.be>  
 French Centre antipoison +352 800 255 00 <http://www.centreantipoisons.be>

(Contd. on page 13)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

**Trade name: N,N-dimethylformamide**

(Contd. of page 12)

Netherlands Dutch 31 (0)88 755 8 <https://www.productnotificatie.nl>

Norway Norwegian Giftinformasjonen +47 22 59 13 00 <https://helsenorge.no/Giftinformasjon>

Poland Polish Kraków +48 12 411 99 99 <http://www.oit.cm.uj.edu.pl>

Gdansk +48 58 682 04 04 <http://www.pctox.pl/news.php>

Poznań +48 61 847 69 46 [http://www.raszeja.poznan.pl/oddzialy/oddzial\\_toksykologiczny](http://www.raszeja.poznan.pl/oddzialy/oddzial_toksykologiczny)

Warszawa +48 607 218 174 [okzit@burdapi.pol.pl](mailto:okzit@burdapi.pol.pl)

Portugal Portuguese Centro de Informação Antivenenos +351 808 250 143 <http://www.inem.pt>

Romania Romanian CNMRMC +40 213 183 606 [infotox@insp.gov.ro](mailto:infotox@insp.gov.ro)

Spitalul Clinic de Urgenta Bucuresti +40 215 992 300 int. 291

[spital@urgentaflorasca.ro](mailto:spital@urgentaflorasca.ro)

Spitalul Clinic Judetean de Urgenta Targu Mures +40 265.212.111

[secretariat@spitjudms.ro](mailto:secretariat@spitjudms.ro)

Russia Russian Горячая линия Министерства здравоохранения +7 495 628 4453; +7 495 627 2944  
<http://rospotrebnadzor.ru>

Serbia Serbian Nacionalni centar za kontrolu trovanja +381 11 3608 440 <http://www.vma.mod.gov.rs/sr-lat/specijalnosti/centri/nacionalni-centar-za-kontrolu-trovanja>

Slovak Rep Slovak Národné toxikologické informačné centrum +421 2 5477 4166 <http://www.ntic.sk>

Spain Spanish Servicio de Información Toxicológica +34 91 562 04 20 [https://www.administraciondejusticia.gob.es/paj/pub\\_lenco/ciudadano/informacion\\_institucional/organismos/instituto\\_nacional\\_de\\_toxicologia\\_y\\_ciencias\\_fo\\_renses/servicios/info\\_toxicologica/que\\_es\\_sit/ut/p/c5/04\\_SB8K8xLLM9MSSzPy8xBz9CP0os3g\\_A1ejCydDRwMDUwNLA08nwzAvM0czA\\_8gM6B8pFm8mae\\_rqWdQslmJcaiLiYGncViYa4CHr4GBiQExuglwAEdCusNBrsWpwsLUACKPy3WuRvjlg83wy5sQ0G8CtR-P\\_w\\_8\\_8\\_n\\_N\\_T\\_9\\_Q\\_t\\_y\\_Q\\_y\\_M\\_M\\_M\\_j\\_0\\_z\\_A\\_9\\_I\\_V\\_F\\_Q\\_H\\_Y\\_1\\_8\\_l\\_4/\\_d\\_l\\_3/\\_d\\_3/\\_L2dJQSEvUUt3QS9ZQnZ3LzZfTjBFMjhCMUEwMDUwOTBJQjFWSjZBNjBPTjA!/?itemId=45381](https://www.administraciondejusticia.gob.es/paj/pub_lenco/ciudadano/informacion_institucional/organismos/instituto_nacional_de_toxicologia_y_ciencias_fo_renses/servicios/info_toxicologica/que_es_sit/ut/p/c5/04_SB8K8xLLM9MSSzPy8xBz9CP0os3g_A1ejCydDRwMDUwNLA08nwzAvM0czA_8gM6B8pFm8mae_rqWdQslmJcaiLiYGncViYa4CHr4GBiQExuglwAEdCusNBrsWpwsLUACKPy3WuRvjlg83wy5sQ0G8CtR-P_w_8_8_n_N_T_9_Q_t_y_Q_y_M_M_M_j_0_z_A_9_I_V_F_Q_H_Y_1_8_l_4/_d_l_3/_d_3/_L2dJQSEvUUt3QS9ZQnZ3LzZfTjBFMjhCMUEwMDUwOTBJQjFWSjZBNjBPTjA!/?itemId=45381)

Sweden Swedish Giftinformationscentralen +46 10 456 6700 <https://giftinformation.se>

Switzerland German Giftinformationszentrum 145 <http://toxinfo.ch>

French Centre antipoison 145 <http://toxinfo.ch>

Italian Centro Antiveneni 145 <http://toxinfo.ch>

United Kingdom English NHS Helpline 111 NHS Helpline - England and Wales: <http://www.nhs.uk/NHSEngland/AboutNHSservices/Emergencyandurgentcareservices/Pages/NHS-111.aspx>

• **Date of previous version:** 19.10.2022

• **Version number of previous version:** 5

• **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

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 (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids – Category 3

(Contd. on page 14)



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

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

***Trade name: N,N-dimethylformamide***

*Acute Tox. 4: Acute toxicity – Category 4*

*Eye Irrit. 2: Serious eye damage/eye irritation – Category 2*

*Carc. 1B: Carcinogenicity – Category 1B*

*Repr. 1B: Reproductive toxicity – Category 1B*

***\* Data compared to the previous version altered.***

(Contd. of page 13)

EU

(Contd. on page 15)



## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

**Trade name: N,N-dimethylformamide**

(Contd. of page 14)

### **Annex: Exposure scenario**

- **Short title of the exposure scenario** Industrial use as an intermediate or as a process chemical
- **Sector of Use**
  - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
  - SU9 Manufacture of fine chemicals
  - SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
  - SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
  - SU24 Scientific research and development
- **Product category**
  - PC19 Intermediate
  - PC21 Laboratory chemicals
- **Process category**
  - PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
  - PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
  - PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
  - PROC4 Chemical production where opportunity for exposure arises
  - PROC5 Mixing or blending in batch processes
  - PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
  - PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
  - PROC15 Use as laboratory reagent
- **Environmental release category**
  - ERC2 Formulation into mixture
  - ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
  - ERC6a Use of intermediate
- **Notes**
  - The product is not intended for industrial use.
  - The product is intended for professional use.
- **Description of the activities / processes covered in the Exposure Scenario**  
68-12-2
  1. Used as chemical intermediate  
Main User Groups : SU 3  
Sectors of end-use : SU 3, SU9  
Chemical product category : PC19  
Process categories : PROC1, PROC2, PROC3, PROC4, PROC8b, PROC9  
Environmental Release Categories : ERC6a
  2. Formulation of preparations  
Main User Groups : SU 3  
Sectors of end-use : SU 10  
Process categories : PROC5, PROC8b, PROC9  
Environmental Release Categories : ERC2
  3. Industrial use of processing aids in processes and products, not becoming part of articles

(Contd. on page 16)



## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

**Trade name: N,N-dimethylformamide**

(Contd. of page 15)

Main User Groups : SU 3

Sectors of end-use : SU 3, SU9

Process categories : PROC1, PROC2, PROC3, PROC4, PROC8b, PROC9

Environmental Release Categories : ERC4

#### 4. Used as laboratory reagent

Main User Groups : SU 22

Sectors of end-use : SU 3, SU 22, SU24

Chemical product category : PC21

Process categories : PROC15

Environmental Release Categories : ERC4, ERC6a

#### · **Conditions of use**

· **Duration and frequency** 5 workdays/week.

#### · **Worker**

Application duration : &gt; 4 h

Frequency of use : 220 days/year

· **Environment** Indoor use

· **Physical parameters** See section 9 to the Safety Data Sheet.

· **Physical state** Fluid

· **Concentration of the substance in the mixture**

Raw material.

Covers the percentage of the substance in the product up to 100 %.

· **Used amount per time or activity** Covers the percentage of the substance in the product up to 100 %

· **Other operational conditions** Observe the general safety regulations when handling chemicals.

· **Other operational conditions affecting environmental exposure**

Observe section 6 of the Safety Data Sheet (Accidental release measures).

· **Other operational conditions affecting worker exposure**

Avoid contact with eyes.

Avoid contact with the skin.

Do not breathe gas/vapour/aerosol.

Take precautionary measures against static discharge.

Keep away from sources of ignition - No smoking.

Keep container tightly closed and in a well-ventilated place.

· **Risk management measures**

· **Worker protection** Observe section 7.1 and 8.1-8.2 of the Safety Data Sheet

· **Organisational protective measures**

Avoid contact with drinking water and / or food during application.

Ensure that activities are executed by specialists or authorised personnel only.

Provide washing facilities in the workplace.

Consider section 4 of the Safety Data Sheet (First aid measures).

· **Technical protective measures**

Ensure that suitable extractors are available on processing machines

Provide explosion-proof electrical equipment.

· **Personal protective measures**

Do not inhale gases / fumes / aerosols.

Avoid contact with the skin.

Avoid contact with the eyes.

(Contd. on page 17)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

**Trade name: N,N-dimethylformamide**

(Contd. of page 16)

Pregnant women should strictly avoid inhalation or skin contact.

Tightly sealed goggles

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

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

Protective gloves

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

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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

· **Measures for consumer protection** Ensure adequate labelling.

· **Environmental protection measures**

· **Water** Do not allow to reach ground water, water bodies or sewage system.

· **Soil** Prevent contamination of soil.

· **Notes** In case of unintended release of the product: See section 6 of the Safety Data Sheet.

· **Disposal measures**

Disposal must be made according to official regulations.

Ensure that waste is collected and contained.

· **Disposal procedures**

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

· **Waste type** Partially emptied and uncleaned packaging

· **Exposure estimation**

· **Worker (dermal)**

68-12-2 With local exhaust ventilation

PROC1 0.0172 mg/kg BW/d

PROC2 0.0686 mg/kg BW/d

PROC3 0.0172 mg/kg BW/d

PROC4 0.3429 mg/kg BW/d

PROC5 0.6857 mg/kg BW/d

PROC8b 0.3429 mg/kg BW/d

PROC9 0.3429 mg/kg BW/d

PROC15 0.0171 mg/kg BW/d

The calculated value is smaller than the DNEL.

Risk Characterization ratio <1

· **Worker (inhalation)**

68-12-2 With local exhaust ventilation

PROC1 0.0355 mg/m<sup>3</sup>

PROC2 0.3546 mg/m<sup>3</sup>

PROC3 1.0639 mg/m<sup>3</sup>

PROC4 1.7731 mg/m<sup>3</sup>

PROC5 1.7731 mg/m<sup>3</sup>

PROC8b 0.5319 mg/m<sup>3</sup>

(Contd. on page 18)

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

Printing date 26.12.2023

Version number 6 (replaces version 5)

Revision: 12.07.2023

**Trade name: N,N-dimethylformamide**

(Contd. of page 17)

PROC9 1.7731 mg/m<sup>3</sup>

PROC15 1.7731 mg/m<sup>3</sup>

The calculated value is smaller than the DNEL.

Risk Characterization ratio &lt;1

· **Environment**

A chemical safety assessment was performed according REACH Article 14(3), Annex I, sections 3 (Environmental Hazard assessment) and 4 (PBT/vPvB Assessment). As no hazard was identified, an exposure assessment and risk characterization is not necessary (REACH Annex I section 5.0).

· **Consumer** Not relevant for this Exposure Scenario.

· **Guidance for downstream users**

Please refer to the following documents: ECHA Guidance on information requirements and chemical safety assessment Chapter R.12: Use descriptor system; ECHA Guidance for downstream users; ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building, Part E: Risk Characterisation and Part G: Extending the SDS; VCI/Cefic REACH Practical Guides on Exposure Assessment and Communications in the Supply Chain; CEFIC Guidance Specific Environmental Release Categories (SPERCs).