

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

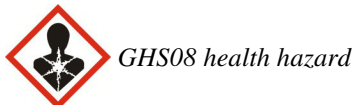
- **Product identifier**
- **Trade name:** N,N-Dimethylformamide, ACS
- **Article number:** 191417
- **CAS Number:**
68-12-2
- **EC number:**
200-679-5
- **Index number:**
616-001-00-X
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
MP Biomedicals Europe
Parc d'Innovation BP 50067
Rue Geiler de Kaysersberg
Illkirch Cedex 67402
France
tel: +33 3.88.67.54.25
www.mpbio.com
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:** :n° ORFILA" (01-45-42-59-59)

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



Flam. Liq. 3 H226 Flammable liquid and vapour.



Repr. 1B H360D May damage the unborn child.

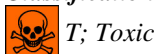


Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Repr. Cat. 2

R61: May cause harm to the unborn child.

(Contd. on page 2)

Safety data sheet


according to 1907/2006/EC, Article 31

Printing date 22.01.2013


Revision: 22.01.2013

Trade name: *N,N*-Dimethylformamide, ACS

(Contd. of page 1)

 *Xn; Harmful*

R20/21: Harmful by inhalation and in contact with skin.

 *Xi; Irritant*

R36: Irritating to eyes.

· **Information concerning particular hazards for human and environment:** Not applicable.

· **Label elements**

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

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

· **Hazard pictograms**



· **Signal word** *Danger*

· **Hazard-determining components of labelling:**

N,N-dimethylformamide

· **Hazard statements**

H226 Flammable liquid and vapour.

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

H319 Causes serious eye irritation.

H360D May damage the unborn child.

· **Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

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

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/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:** Void

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

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

· **Identification number(s)**

· **EC number:** 200-679-5

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.01.2013

Revision: 22.01.2013

Trade name: N,N-Dimethylformamide, ACS

(Contd. of page 2)

· **Index number:** 616-001-00-X

· **SVHC**

68-12-2 | N,N-dimethylformamide

4 First aid measures

· **Description of first aid measures**

· **General information:**

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:** If symptoms persist consult doctor.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **Special hazards arising from the substance or mixture** No further relevant information available.

· **Advice for firefighters**

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

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Not required.

· **Environmental precautions:**

Dilute with plenty of water.

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

· **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 item 13.

Ensure adequate ventilation.

· **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.

EU

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 22.01.2013

Revision: 22.01.2013

Trade name: *N,N-Dimethylformamide, ACS*

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** Room Temperature
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

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

68-12-2 N,N-dimethylformamide

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

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **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.
- **Protection of hands:**



Protective gloves

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.

(Contd. on page 5)

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

Printing date 22.01.2013

Revision: 22.01.2013

Trade name: *N,N*-Dimethylformamide, ACS

(Contd. of page 4)

- **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 protection:**



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:	Fluid
· Colour:	Colourless
· Odour:	Amine-like
· Odour threshold:	Not determined.

· **pH-value at 20 °C:** 7

· Change in condition

· Melting point/Melting range:	-61 °C
· Boiling point/Boiling range:	152 °C

· **Flash point:** 58 °C

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 440 °C

· **Decomposition temperature:** Not determined.

· **Self-igniting:** Not determined.

· **Danger of explosion:** Not determined.

· Explosion limits:

· Lower:	2,2 Vol %
· Upper:	16 Vol %

· **Vapour pressure at 20 °C:** 3,5 hPa

· Density at 20 °C:	0,95 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· **Solubility in / Miscibility with water:** Fully miscible.

· **Partition coefficient (n-octanol/water):** Not determined.

· Viscosity:

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· Solvent content:

· **Organic solvents:** 0,0 %

(Contd. on page 6)

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

Printing date 22.01.2013

Revision: 22.01.2013

Trade name: *N,N*-Dimethylformamide, ACS

(Contd. of page 5)

VOC (EC) 0,00 %
 · **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

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

68-12-2 N,N-dimethylformamide

Oral	LD50	2800 mg/kg (rat)
Dermal	LD50	4720 mg/kg (rabbit)
Inhalative	LC50/4 h	9400 mg/l (mouse)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Repr. 1B

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

EU

(Contd. on page 7)

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

Printing date 22.01.2013

Revision: 22.01.2013


Trade name: *N,N*-Dimethylformamide, ACS

(Contd. of page 6)

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· UN-Number	
· ADR, IMDG, IATA	UN2265
· UN proper shipping name	
· ADR	2265 <i>N,N</i> -DIMETHYLFORMAMIDE
· IMDG, IATA	<i>N,N</i> -DIMETHYLFORMAMIDE
· Transport hazard class(es)	
· ADR, IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
· Packing group	
· ADR, IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids.
· Danger code (Kemler):	30
· EMS Number:	F-E,S-D
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Transport category	3
· Tunnel restriction code	D/E
· UN "Model Regulation":	UN2265, <i>N,N</i> -DIMETHYLFORMAMIDE, 3, III

EU

(Contd. on page 8)

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

Printing date 22.01.2013

Revision: 22.01.2013

Trade name: *N,N-Dimethylformamide, ACS*

(Contd. of page 7)

15 Regulatory information

- *Safety, health and environmental regulations/legislation specific for the substance or mixture*
 - *National regulations:*
 - *Other regulations, limitations and prohibitive regulations*
 - *Substances of very high concern (SVHC) according to REACH, Article 57*
- | | |
|---------|-----------------------|
| 68-12-2 | N,N-dimethylformamide |
|---------|-----------------------|
- *Chemical safety assessment: A Chemical Safety Assessment has not been carried out.*

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 MSDS: Product safety department*
- *Abbreviations and acronyms:*
 - ADR: Accord européen sur le transport 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 Harmonized 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)*
 - VOC: Volatile Organic Compounds (USA, EU)*
 - LC50: Lethal concentration, 50 percent*
 - LD50: Lethal dose, 50 percent*

EU