

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

Printing date 06.12.2011

Version number 1

Revision: 06.12.2011

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

### 1.1. Product identifier

· Trade name: Formamide

· Article number: 39604

· CAS Number:

75-12-7

· EC number:

200-842-0

· Index number:

616-052-00-8

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

· Application of the substance / the preparation Laboratory chemicals

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

· Manufacturer/Supplier:

SERVA Electrophoresis GmbH

Carl-Benz-Str. 7

D-69115 Heidelberg

Tel.: +49 6221 13840-0

FAX: +49 6221 13840-10

msds.info@serva.de

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

· 1.4. Emergency telephone number: +49 6131 19240 (university hospital Mainz)

**SERVA**  
Electrophoresis

## 2 Hazards identification

· 2.1. Classification of the substance or mixture

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



GHS08

Repr. 1B H360D May damage the unborn child.

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



T; Toxic

Repr. Cat. 2

R61: May cause harm to the unborn child.

· Classification system:

The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

· 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 GHS08

· Signal word Danger

· Hazard statements

H360D May damage the unborn child.

· Precautionary statements

P201 Obtain special instructions before use.

P281 Use personal protective equipment as required.

P202 Do not handle until all safety precautions have been read and understood.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

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

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- **2.3. Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.

### 3 Composition/information on ingredients

- **3.1. Chemical characterization: Substances**
- **CAS No. Description:**  
75-12-7 Formamide
- **Identification number(s):**
- **EC number:** 200-842-0
- **Index number:** 616-052-00-8
- **Description:**
- **Empirical formula:** C H<sub>3</sub> N O
- **MW:** 45,0

### 4 First aid measures

- **4.1. Description of first aid measures**
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Immediately rinse with water.
- **After eye contact**  
Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing.
- **After swallowing** Drink copious amounts of water and provide fresh air. Call for doctor immediately.
- **Information for doctor**
- **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.

### 5 Firefighting measures

- **5.1. Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2. Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.  
In case of fire, the following can be released:  
Nitrogen oxides (NO<sub>x</sub>)  
Hydrogen cyanide (HCN)  
Carbon monoxide (CO)  
In certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:  
Ammonia (NH<sub>3</sub>)
- **5.3. Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

### 6 Accidental release measures

- **6.1. Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Ensure adequate ventilation
- **6.2. Environmental precautions:**  
Dilute with plenty of water.

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- Do not allow to enter sewers/ surface or ground water.
- **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 item 13.
- **6.4. Reference to other sections**  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

- **Handling**
- **7.1. Precautions for safe handling**  
Open and handle receptacle with care.  
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **7.2. Conditions for safe storage, including any incompatibilities**
- **Storage**
- **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:**  
Store under lock and key and with access restricted to technical experts or their assistants only.  
This product is hygroscopic.  
Protect from humidity and water.
- **7.3. Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

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

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

**75-12-7 Formamide (80-100%)**

WEL	Short-term value: 56 mg/m <sup>3</sup> , 30 ppm
	Long-term value: 37 mg/m <sup>3</sup> , 20 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2. 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.
- **Breathing equipment:**  
Short term filter device:  
Filter A/P2.
- **Protection of hands:**  
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.

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- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**  
Nitrile rubber, NBR  
Chloroprene rubber, CR
- **Eye protection:** Tightly sealed goggles.
- **Body protection:** Protective work clothing.

## 9 Physical and chemical properties

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

#### · General Information

#### · Appearance:

· <b>Form:</b>	Liquid
· <b>Colour:</b>	Colourless
· <b>Odour:</b>	Recognizable

· **pH-value (200 g/l) at 20°C:** 4.0 - 5.0

#### · Change in condition

· <b>Melting point/Melting range:</b>	2°C
· <b>Boiling point/Boiling range:</b>	210°C

· **Flash point:** 175°C

· **Ignition temperature:** 500°C

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

#### · Explosion limits:

· <b>Lower:</b>	2.7 Vol %
· <b>Upper:</b>	19 Vol %

· **Vapour pressure at 20°C:** 0.08 hPa

· **Density at 20°C:** 1.13 g/cm<sup>3</sup>

#### · Solubility in / Miscibility with

· **Water:** Fully miscible

#### · Viscosity:

· **dynamic at 20°C:** 3.75 mPas

· **9.2. Other information** There are no more data available.

## 10 Stability and reactivity

- **10.1. Reactivity** No further relevant informations available
- **10.2. Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3. Possibility of hazardous reactions** Danger of explosion with iodine, pyridine, SO<sub>3</sub>
- **10.4. Conditions to avoid** No further relevant information available.
- **10.5. Incompatible materials:** No further relevant information available.
- **10.6. Hazardous decomposition products:**  
Nitrogen oxides  
Hydrogen cyanide (prussic acid)  
Carbon monoxide and carbon dioxide

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Ammonia

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## 11 Toxicological information

### · 11.1. Information on toxicological effects

#### · Acute toxicity:

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

Oral	LD50	4000 mg/kg (rat)
Dermal	LD50	17000 mg/kg (rabbit)
	LC50/96h	4600 - 9300 mg/l (Fish)

#### · Primary irritant effect:

· **on the skin:** No irritant effect.

· **on the eye:** No irritating effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:** Danger through skin resorption.

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

Repr. 1B

## 12 Ecological information

### · 12.1. Toxicity

#### · Aquatic toxicity:

EC50/48h	> 500 mg/l (Daphnia magna)
EC50/72h	> 500 mg/l (Scenedesmus subspicatus)

· **12.2. Persistence and degradability** No further relevant information available.

#### · Other information:

The product is easily biodegradable.

> 70% in 28 d

#### · Behaviour in environmental systems:

· **12.3. Bioaccumulative potential** No further relevant information available.

· **12.4. 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.

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

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

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

· **12.6. Other adverse effects** No further relevant information available.

## 13 Disposal considerations

### · 13.1. Waste treatment methods

#### · Recommendation

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

#### · Uncleaned packagings:

· **Recommendation:** Disposal must be made according to official regulations.

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

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**14 Transport information**

· <b>14.1. UN-Number</b> · <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>14.2. UN proper shipping name</b> · <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>14.3. Transport hazard class(es)</b> · <b>ADR, IMDG, IATA</b> · <b>Class</b> · <b>Label</b> · <b>ADN/R Class:</b>	Void - Void
· <b>14.4. Packing group</b> · <b>ADR, IMDG, IATA</b>	Void
· <b>14.5. Environmental hazards:</b>	Not applicable.
· <b>14.6. Special precautions for user</b>	Not applicable.
· <b>14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	Not dangerous according to the above specifications.
· <b>UN "Model Regulation":</b>	-

**15 Regulatory information**

- **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Information about limitation of use:**  
Employment restrictions concerning pregnant and lactating women must be observed.
- **Technical instructions (air):**

Class	Share in %
NK	80-100
- **Water hazard class:** Water hazard class 1 (Assessment by list): slightly hazardous for water.
- **15.2. Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**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
- **Contact:** +49 6221 13840-35
- **Abbreviations and acronyms:**  
 PBT: persistent, bioaccumulative, toxic substance (REACH)  
 vPvB: very persistent, very bioaccumulative substance (REACH)  
 REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals  
 CLP: Regulation on classification, labelling and packaging of substances and mixtures  
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 ICAO: International Civil Aviation Organization  
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
 EINECS: European Inventory of Existing Commercial Chemical Substances

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CAS: Chemical Abstracts Service (division of the American Chemical Society)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent

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

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