



**Hazards not otherwise classified**  
(HNOC) none/none

### **SECTION 3. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -**

#### **3.1 Substances**

Substance name	Formamide
Molecular formula	CH3NO
Molecular weight	45.04 g/mol
CAS No.	75-12-7

### **SECTION 4. - - - - - FIRST-AID MEASURES - - - - -**

#### **4.1 General information**

IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

##### **After inhalation**

Call a POISON CENTER/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

##### **In case of skin contact**

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

##### **After eye contact**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

##### **In case of ingestion**

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting. Give nothing to eat or drink.

#### **4.2 Most important symptoms/effects, acute and delayed**

no data available

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

no data available

#### **4.4 Self-protection of the first aider**

First aider: Pay attention to self-protection!

#### **4.5 Information to physician**

no data available

### **SECTION 5. - - - - - FIRE FIGHTING MEASURES - - - - -**

#### **5.1 Extinguishing media**

##### **Suitable extinguishing media**

The product itself does not burn.

Co-ordinate fire-fighting measures to the fire surroundings.

**Extinguishing media which must not be used for safety reasons** no restriction

#### **5.2 Specific hazards arising from the chemical**

In case of fire may be liberated:

Carbon monoxide

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

Nitrogen oxides (NOx)

### 5.3 Advice for firefighters

DO NOT fight fire when fire reaches explosives.  
Protective equipment and precautions for firefighters  
Wear a self-contained breathing apparatus and chemical protective clothing.

#### Additional information

Do not allow run-off from fire-fighting to enter drains or water courses.  
Do not inhale explosion and combustion gases.  
Use water spray/stream to protect personnel and to cool endangered containers.  
In case of fire: Evacuate area.

## SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----

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

In case of major fire and large quantities: Remove persons to safety.

### 6.2 Environmental precautions

Discharge into the environment must be avoided.

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

Spilled product must never be returned to the original container for recycling. Collect in closed and suitable containers for disposal.

### 6.4 Additional information

Clear spills immediately.

## SECTION 7. ----- HANDLING AND STORAGE-----

### 7.1 Precautions for safe handling

Avoid exposure - obtain special instructions before use. Avoid: Inhalation Avoid contact with eyes and skin. Provide adequate ventilation as well as local exhaust at critical locations. Usual measures for fire prevention.

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

Recommended storage temperature: 2-8 °C  
Keep container tightly closed and in a well-ventilated place. Always close containers tightly after the removal of product.

### 7.3 Specific end use(s)

no data available

## SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----

### 8.1 Control parameters

Ingredient (Designation)	Regulatory information	Country	Limit value type (country of origin)	Limit value
Formamide	Gestis	CA	LTV	18 mg/m <sup>3</sup> - 10 ppm

### 8.2 Engineering controls

#### Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

#### Personal protection equipment (PPE)

Wear suitable protective clothing. When handling with chemical substances, protective clothing must be worn.

#### *Eye/face protection*

Eye glasses with side protection

#### *Skin protection*

Wear suitable gloves. When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

#### By short-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,12 mm
Breakthrough time (maximum wearing time):	240-480 min

#### By long-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,38 mm
Breakthrough time (maximum wearing time):	> 480 min

#### *Respiratory protection*

Respiratory protection necessary at: aerosol or mist formation If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

#### *Additional information*

Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

#### *Environmental exposure controls*

no data available

## **SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -**

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

#### (a) Appearance

Physical state:	liquid
Color:	colorless

(b) Odour: no data available

(c) Odour threshold: no data available

#### **Safety relevant basic data**

(d) pH: 4-5 (200 g/l; H<sub>2</sub>O; 20 °C)

(e) Melting point/freezing point: 2 °C

(f) Initial boiling point and boiling range: 210 °C (1013 hPa)

(g) Flash point: 79 °C

(h) Evaporation rate: no data available

(i) Flammability (solid, gas): not applicable

(j) Flammability or explosive limits

Lower explosion limit:	2.7 % (v/v)
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Upper explosion limit:	19 % (v/v)
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(k) Vapour pressure: 30 mmHg (130 °C)

(l) Vapour density: 1.56 (20 °C)

(m) Relative density: 1.1334 g/cm<sup>3</sup> (20 °C)

(n) Solubility(ies)

Water solubility (g/L):	soluble (20 °C)
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Soluble (g/L) in Ethanol:	no data available
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(o) Partition coefficient: n-octanol/water: -1.51 (20 °C)

(p) Auto-ignition temperature: 500 °C (DIN 51794)

(q) Decomposition temperature:	no data available
(r) Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	3.75 mPa*s (20 °C)
(s) Explosive properties:	not applicable
(t) Oxidising properties:	not applicable

## 9.2 Other information

Bulk density:	not applicable
Refraction index:	1.44911 (589 nm; 20 °C)
Dissociation constant:	no data available
Surface tension:	no data available
Henry constant:	no data available

## SECTION 10. ----- -STABILITY AND REACTIVITY -----

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

no data available

### 10.6 Hazardous decomposition products

no data available

### 10.7 Additional information

no data available

## SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

### 11.1 Information on toxicological effects

#### Acute effects

*Acute oral toxicity:*

LD50: > 5800 mg/kg - Rat - (Merck KGaA)

*Acute dermal toxicity:*

LD50: > 17000 mg/kg - Rabbit - (Merck KGaA)

*Acute inhalation toxicity:*

LC50: > 3900 ppm - Rat - (National Library of Medicine ChemID Plus (NLM CIP))

#### Irritant and corrosive effects

*Primary irritation to the skin:*

not applicable

*Irritation to eyes:*

not applicable

*Irritation to respiratory tract:*  
not applicable

**Respiratory or skin sensitization**

In case of skin contact: not sensitising

After inhalation: not sensitising

**STOT-single exposure**

not applicable

**STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

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

**Carcinogenicity**

The table below indicates whether each agency has listed any ingredient as a carcinogen.

no data available	ACGIH	IARC	NTP	OSHA

**Germ cell mutagenicity**

No indications of human germ cell mutagenicity exist.

**Reproductive toxicity**

May damage fertility or the unborn child.

**Aspiration hazard**

not applicable

**Other adverse effects**

no data available

**Additional information**

no data available

**SECTION 12. ----- ECOLOGICAL INFORMATION -----**

**12.1 Ecotoxicity**

**Fish toxicity:**

no data available

**Daphnia toxicity:**

no data available

**Algae toxicity:**

no data available

**Bacteria toxicity:**

no data available

**12.2 Persistence and degradability**

no data available

### 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water: -1.51 (20 °C)

### 12.4 Mobility in soil:

no data available

### 12.5 Results of PBT/vPvB assessment

no data available

### 12.6 Other adverse effects

no data available

## SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

### 13.1 Waste treatment methods

#### Appropriate disposal / Product

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal. Send to a hazardous waste incinerator facility under observation of official regulations.

Waste code product: no data available

#### Appropriate disposal / Package

Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

#### Additional information

no data available

## SECTION 14. ----- TRANSPORT INFORMATION -----

### Land transport (TDG)

No dangerous good in sense of this transport regulation.

### Sea transport (IMDG)

No dangerous good in sense of this transport regulation.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC  
Code not relevant

### Air transport (ICAO-TI / IATA-DGR)

No dangerous good in sense of this transport regulation.

## SECTION 15. ----- REGULATORY INFORMATION -----

### Safety, health and environmental regulations/legislation specific for the substance or mixture

Domestic Substance List:

## SECTION 16. ----- OTHER INFORMATION -----

### Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial

Hygienists DOT - Department of Transportation

IARC - International Agency for Research on Cancer

IATA-DGR - International Air Transport Association-Dangerous Goods Regulations

ICAO-TI - International Civil Aviation Organization-Technical Instructions

IMDG - International Maritime Code for Dangerous Goods  
LTV - Long Term Value

NIOSH - National Institute for Occupational Safety and Health  
NTP - National Toxicology Program

OSHA - Occupational Safety & Health Administration  
PBT - Persistent, Bioaccumulative and Toxic

PEL - Permissible Exposure Limit  
STV - Short Term Value

SVHC - Substances of Very High Concern  
TDG - Transport of Dangerous Goods

TLV - Threshold Limit Value

vPvB - very Persistent, very Bioaccumulative

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<b>Recommended Restrictions</b>	No information available

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**End of SDS**