

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

Formamide

Creation date	12. September 2019	Version	1.0
Revision date			

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

- 1.1. Product identifier**
- | | |
|---------------------|-----------------------|
| Substance / mixture | Formamide |
| Chemical name | substance |
| CAS number | Formamide |
| Index number | 75-12-7 |
| EC (EINECS) number | 616-052-00-8 |
| Registration number | 200-842-0 |
| | 01-2119496064-35-xxxx |
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**
- | | |
|--------------------------------|---|
| Substance's intended use | Chemical production, analytical chemistry, laboratory synthesis, industrial applications. |
| Substance uses advised against | The product should not be used in ways other than those referred in Section 1. |
| Chemical safety report | |
- 1.3. Details of the supplier of the safety data sheet**
- Supplier**
- | | |
|-----------------------------|----------------------------------|
| Name or trade name | Ing. Petr Švec - PENTA s.r.o. |
| Address | Radiová 1122/1, Praha 10, 102 00 |
| | Czech Republic |
| Identification number (CRN) | 02096013 |
| VAT Reg No | CZ02096013 |
| Phone | +420 226 060 681 |
| E-mail | info@pentachemicals.eu |
| Web address | www.pentachemicals.eu |
- Competent person responsible for the safety data sheet**
- | | |
|--------|-------------------------------|
| Name | Ing. Petr Švec - PENTA s.r.o. |
| E-mail | info@pentachemicals.eu |
- 1.4. Emergency telephone number**
- National Health Service (NHS) 111
National poisoning information centre Scotland, NHS 24: 111

SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture**
- Classification of the substance in accordance with Regulation (EC) No 1272/2008**
- The substance is classified as dangerous.

Carc. 2, H351
Repr. 1B, H360FD
STOT RE 2, H373

Full text of all classifications and hazard statements is given in the section 16.

Most serious adverse effects on human health and the environment

Suspected of causing cancer. May damage fertility. May damage the unborn child. May cause damage to organs through prolonged or repeated exposure.

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

Formamide

Creation date 12. September 2019
Revision date Version 1.0

2.2. Label elements

Hazard pictogram



Signal word

Danger

Dangerous substance

Formamide (Index: 616-052-00-8; CAS: 75-12-7)

Hazard statements

H351 Suspected of causing cancer.
H360FD May damage fertility. May damage the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P201 Obtain special instructions before use.
P280 Wear protective gloves.
P308+P313 IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards

Substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical characterization

The substance specified below.

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note.
Index: 616-052-00-8 CAS: 75-12-7 EC: 200-842-0 Registration number: 01-2119496064-35-xxxx	substance main component Formamide	>99	Carc. 2, H351 Repr. 1B, H360FD STOT RE 2, H373	1

Notes

1 Substance of very high concern - SVHC.

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

Formamide

Creation date	12. September 2019	Version	1.0
Revision date			

If inhaled

Terminate the exposure immediately; move the affected person to fresh air. Protect the person against growing cold. Provide medical treatment if irritation, dyspnoea or other symptoms persist.

If on skin

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible. Soap, soap solution or shampoo should be used if there is no skin injury. Provide medical treatment if skin irritation persists.

If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. Rinsing should continue at least for 10 minutes.

If swallowed

Provide medical treatment. For persons with no symptoms, call the Toxicological Information Centre to decide about the need of medical treatment; provide information about the substances or composition of the product from the original packaging or the Safety Data Sheet of the product.

4.2. Most important symptoms and effects, both acute and delayed

If inhaled

Cough, headache.

If on skin

Not expected.

If in eyes

Not expected.

If swallowed

Irritation, nausea.

4.3. Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale aerosols.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water.

6.3. Methods and material for containment and cleaning up

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

Formamide

Creation date	12. September 2019	Version	1.0
Revision date			

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not inhale aerosols. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Store locked up.

Storage class 12 - Other non-combustible liquids

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

none

8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

It is not needed.

Skin protection

Hand protection: Protective gloves resistant to the product. Contaminated skin should be washed thoroughly.

Respiratory protection

Mask with a filter against organic vapours in a poorly ventilated environment.

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	
Physical state	liquid at 20°C
color	colourless
Odour	containing ammoniac
Odour threshold	data not available
pH	8 - 10 (200 g/l% solution at 20 °C)
Melting point/freezing point	2 - 3 °C
Initial boiling point and boiling range	210 °C
Flash point	175 °C
Evaporation rate	data not available
Flammability (solid, gas)	data not available
Upper/lower flammability or explosive limits	
flammability limits	data not available
explosive limits	
bottom	2.7 %
upper	19.0 %
Vapour pressure	0.08 hPa at 20 °C
Vapour density	data not available
Relative density	data not available
Solubility(ies)	
solubility in water	údaj není k dispozici mísitelný

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

Formamide

Creation date	12. September 2019	Version	1.0
Revision date			
solubility in fats		data not available	
Partition coefficient: n-octanol/water		-0.82	
Auto-ignition temperature		data not available	
Decomposition temperature		data not available	
Viscosity		data not available	
Explosive properties		data not available	
Oxidising properties		data not available	
9.2. Other information			
Density		1.13 g/cm ³	
ignition temperature		data not available	

SECTION 10: Stability and reactivity

10.1. Reactivity

The substance is non-flammable.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Unknown.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

No toxicological data is available for the substance.

Acute toxicity

Based on available data the classification criteria are not met.

Formamide

Route of exposure	Parameter	Method	Value	Time of exposure	Species	Sex
Oral	LD50	OECD 401	5 325 mg/kg		Rat	
Inhalation	LC50	OECD 403	21 mg/l	4 hour	Rat	
Dermal	LD50		17 000 mg/kg		Rabbit	

Irritation

Formamide

Route of exposure	Result	Method	Time of exposure	Species
Eye	Slightly irritating	OECD 405		Rabbit
Skin	Not irritating			Rabbit

Skin corrosion/irritation

Based on available data the classification criteria are not met.

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

Formamide

Creation date 12. September 2019 Version 1.0
Revision date

Serious eye damage/irritation

Based on available data the classification criteria are not met.

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

Suspected of causing cancer.

Reproductive toxicity

May damage fertility. May damage the unborn child.

Toxicity for specific target organ - single exposure

Based on available data the classification criteria are not met.

Toxicity for specific target organ - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Formamide

Route of exposure	Parameter	Result	Method	Value	Time of exposure	Species	Sex
Oral	NOAEL		OECD 408	40-80 mg/kg		Rat	F/M
Dermal	NOAEL		OECD 411	100 mg/kg		Rat	F/M
Inhalation (vapor)	NOAEL		OECD 412	0.19 mg/kg		Rat	M

Aspiration hazard

Based on available data the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity

Based on available data the classification criteria are not met.

Formamide

Parameter	Value	Time of exposure	Species	Environment
LC50	4 600-9 300 mg/l	96 hour	Fishes (Leuciscus idus)	
EC50	> 500 mg/l	48 hour	Daphnia (Daphnia magna)	
EC50	> 500 mg/l	72 hour	Algae (Desmodesmus subspicatus)	

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

Formamide

Creation date 12. September 2019
Revision date Version 1.0

Formamide

Parameter	Value	Time of exposure	Species	Environment
EC50	>10 000 mg/l	17 hour	Bacteria (<i>Pseudomonas putida</i>)	

12.2. Persistence and degradability

Biodegradability

Formamide

Parameter	Method	Value	Time of exposure	Environment	Result
	OECD 301A	99 %	28 day		Easily biodegradable

Data not available.

12.3. Bioaccumulative potential

Formamide

Parameter	Method	Value	Time of exposure	Species	Environment	Surrounding temperature [°C]
Log Pow	OECD 107	-0.82				25°C

Not available.

12.4. Mobility in soil

Not available.

12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. Other adverse effects

Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

SECTION 14: Transport information

14.1. UN number

Not subject to ADR

14.2. UN proper shipping name

not available

14.3. Transport hazard class(es)

not available

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

Formamide

Creation date	12. September 2019	Version	1.0
Revision date			

14.4. Packing group

not available

14.5. Environmental hazards

not available

14.6. Special precautions for user

Reference in the Sections 4 to 8.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not available

SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended.

15.2. Chemical safety assessment

not available

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

H351	Suspected of causing cancer.
H360FD	May damage fertility. May damage the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

Guidelines for safe handling used in the safety data sheet

P201	Obtain special instructions before use.
P280	Wear protective gloves.
P308+P313	IF exposed or concerned: Get medical advice/attention.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
DNEL	Derived no-effect level
EC	Identification code for each substance listed in EINECS
EC50	Concentration of a substance when it is affected 50% of the population
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
IC50	Concentration causing 50% blockade
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

Formamide

Creation date	12. September 2019	Version	1.0
Revision date			
INCI	International Nomenclature of Cosmetic Ingredients		
ISO	International Organization for Standardization		
IUPAC	International Union of Pure and Applied Chemistry		
LC50	Lethal concentration of a substance in which it can be expected death of 50% of the population		
LD50	Lethal dose of a substance in which it can be expected death of 50% of the population		
LOAEC	Lowest observed adverse effect concentration		
LOAEL	Lowest observed adverse effect level		
log Kow	Octanol-water partition coefficient		
MARPOL	International Convention for the Prevention of Pollution From Ships		
NOAEC	No observed adverse effect concentration		
NOAEL	No observed adverse effect level		
NOEC	No observed effect concentration		
NOEL	No observed effect level		
OEL	Occupational Exposure Limits		
PBT	Persistent, Bioaccumulative and Toxic		
PNEC	Predicted no-effect concentration		
ppm	Parts per million		
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals		
RID	Agreement on the transport of dangerous goods by rail		
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations		
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials		
VOC	Volatile organic compounds		
vPvB	Very Persistent and very Bioaccumulative		
Carc.	Carcinogenicity		
Repr.	Reproductive toxicity		
STOT RE	Specific target organ toxicity - repeated exposure		

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended.
REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. First aid principles after the exposure to the chemicals (Zásady pro poskytování první pomoci při expozici chemickým látkám, doc. MUDr. Daniela Pelclová, CSc., MUDr. Alexandr Fuchs, CSc., MUDr. Miroslava Hornychová, CSc., MUDr. Zdeňka Trávníčková, CSc., Jiřina Fridrichovská, prom. chem.). Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

More information

Classification procedure - calculation method.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.