Safety Data Sheet

acc. to Safe Work Australia - Code of Practice

eMix

Version number: 6.1
Replaces version of: 2022-02-07 (5)

Revision: 2022-12-07

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

1.1 Product identifier

Trade name **eMix**

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

Relevant identified uses: Laboratory and analytical use

Uses advised against: Do not use for private purposes (household)

1.3 Details of the supplier of the safety data sheet

InBiome B.V.
Matrix VII gebouw | Science Park 106
1098 XG Amsterdam
Netherlands

Telephone: +31(0)20-2380320
e-mail: info@inbiome.com
Website: www.inbiome.com

Additional information

Importer			
Country	**Name**	**Postal code/city**	**Telephone**
Australia	Douglass Hanly Moir Pathology	NSW 2113 Macquarie Park	+61 2 9855 5295

e-mail (competent person): info@inbiome.com

1.4 Emergency telephone number

Emergency information service: +61 2 9855 5295
This number is only available during the following office hours: Mon-Fri 09:00 AM - 05:00 PM

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Category	Hazard class and category	Hazard state-ment
3.6	carcinogenicity	2	Carc. 2	H351
3.7	reproductive toxicity	1B	Repr. 1B	H360D
3.9	specific target organ toxicity - repeated exposure	2	STOT RE 2	H373

For full text of H-phrases: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Delayed or immediate effects can be expected after short or long-term exposure.

2.2 Label elements

Labelling

- signal word: Danger
- pictograms

GHS08

- hazard statements

H351	Suspected of causing cancer.
H360D	May damage the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

- precautionary statements

P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

- hazardous ingredients for labelling

Contains: Formamide.

2.3 Other hazards

There is no additional information.

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0.1%.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

The product does not contain (other) ingredients which are classified according to present knowledge of the supplier and contribute to the classification of the product and hence require reporting in this section.

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Formamide	CAS No 75-12-7	≥ 60	Carc. 2 / H351 Repr. 1B / H360D STOT RE 2 / H373		

Remarks

All the percentages given are percentages by weight unless stated otherwise. For full text of H-phrases: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. In case of unconsciousness place person in the recovery position. Never give anything by mouth. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician.

Following skin contact

Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

Following eye contact

Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. Call a POISON CENTER or doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

For specialist advice physicians should contact the poison centre.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray; Dry extinguishing powder; Carbon dioxide (CO2);
Co-ordinate firefighting measures to the fire surroundings.

Unsuitable extinguishing media

Water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

During fire hazardous fumes/smoke could be produced, Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2), Hydrogen cyanide (HCN, prussic acid)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

Self-contained breathing apparatus (SCBA). Standard protective clothing for firefighters.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety. Ventilate affected area.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases. Use personal protective equipment as required.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece).

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- flammability hazards

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

- incompatible substances or mixtures

Keep away from alkalis, oxidising substances, acids.

Control of effects

Protect against external exposure, such as

High temperatures

Consideration of other advice

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

- packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

7.3 Specific end use(s)

For research and development use only.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Notation	Source
AU	formamide	75-12-7	WES	10	18				WES

Notation

STEL — short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA — time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs/DMELs/PNECs and other threshold levels

Relevant DNELs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Formamide	75-12-7	DNEL	6.66 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
Formamide	75-12-7	DNEL	6.6 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Formamide	75-12-7	DNEL	0.952 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Formamide	75-12-7	PNEC	5 mg/l	aquatic organisms	water	intermittent release
Formamide	75-12-7	PNEC	0.5 mg/l	aquatic organisms	freshwater	short-term (single instance)
Formamide	75-12-7	PNEC	0.5 mg/l	aquatic organisms	marine water	short-term (single instance)
Formamide	75-12-7	PNEC	100 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Formamide	75-12-7	PNEC	1.26 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Formamide	75-12-7	PNEC	0.151 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Use safety goggle with side protection. (EN166).

Skin protection

Chemical protective clothing.

- hand protection

Wear suitable gloves. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these 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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- type of material

Nitrile rubber

- material thickness

≥ 0,50 mm

- breakthrough time of the glove material

>60 minutes (permeation: level 3)

- other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling. Provide eyewash stations and safety showers at the workplace.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Wear breathing apparatus if exposed to vapours/dust/spray/gases. Type: A (against organic gases and vapours with a boiling point of > 65 °C , colour code: Brown).

Environmental exposure controls

Take appropriate precautions to avoid uncontrolled release into the environment. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	like ammonia
Melting point/freezing point	2.6 °C calculated value, referring to a component of the mixture
Boiling point or initial boiling point and boiling range	218.3 °C at 1,013 hPa calculated value, referring to a component of the mixture
Evaporation rate	not determined
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	LEL: 2.7 vol% UEL: 19 vol% calculated value, referring to a component of the mixture
Flash point	152 °C at 1.013 hPa calculated value, based on a component of the mixture

Auto-ignition temperature	>500 °C (auto-ignition temperature (liquids and gases)) calculated value, referring to a component of the mixture
Decomposition temperature	>140 °C
pH (value)	8 – 10 (in aqueous solution: 200 g/l, 20 °C)
Kinematic viscosity	not determined
Dynamic viscosity	3.75 mPa s at 20 °C
Solubility(ies)	not determined

Partition coefficient n-octanol/water (log value)	-0.82 (25 °C)

Vapour pressure	1.001 mbar at 55.01 °C calculated value, referring to a component of the mixture

Density	1.13 g/cm^3 at 20 °C

Particle characteristics	not relevant (liquid)

9.2 Other information

There is no additional information.

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics	there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat. Thermal decomposition of the avivage may occur above >140 °C.

10.5 Incompatible materials

Acids. Bases. Oxidisers. Iodine. Sulfur trioxide.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5. Carbon monoxide (CO). Carbon dioxide (CO2). Hydrogen cyanide (HCN, prussic acid). Nitrogen oxides (NOx).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to GHS

Acute toxicity

Shall not be classified as acutely toxic.

- acute toxicity of components of the mixture

Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Formamide	75-12-7	oral	LD50	5,325 $^{mg}/_{kg}$	rat
Formamide	75-12-7	dermal	LD50	>3,000 $^{mg}/_{kg}$	rat

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

May damage the unborn child.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards

Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0.1%.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Formamide	75-12-7	LC50	6,569 mg/l	fish	96 h
Formamide	75-12-7	EC50	>500 mg/l	aquatic invertebrates	48 h
Formamide	75-12-7	ErC50	>500 mg/l	algae	72 h
Formamide	75-12-7	NOEC	4,640 mg/l	fish	96 h
Formamide	75-12-7	LOEC	9,300 mg/l	fish	96 h
Formamide	75-12-7	growth rate (Er-Cx) 10%	259 mg/l	algae	72 h

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Formamide	75-12-7	EC50	>1,000 mg/l	microorganisms	30 min
Formamide	75-12-7	NOEC	1,000 mg/l	microorganisms	30 min
Formamide	75-12-7	growth (EbCx) 20%	>1,000 mg/l	microorganisms	30 min

Biodegradation

The relevant substances of the mixture are readily biodegradable.

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Does not contain any substances that are assessed to be PBT or vPvB ≥ 0.1%.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0.1%.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment.

Waste treatment of containers/packagings

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Relevant provisions relating to waste (Basel Convention)

Properties of waste which render it hazardous

H11 Toxic (Delayed or chronic)

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1	**UN number**	not subject to transport regulations
14.2	**UN proper shipping name**	not relevant
14.3	**Transport hazard class(es)**	not assigned
14.4	**Packing group**	not assigned
14.5	**Environmental hazards**	non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to IMO instruments

No data available.

Information for each of the UN Model Regulations

Transport information - national regulations - additional information (UN RTDG)

Not subject to transport regulations: UN RTDG

International Maritime Dangerous Goods Code (IMDG) - additional information

Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR) - additional information

Not subject to ICAO-IATA.

SECTION 15: Regulatory information

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

There is no additional information.

National regulations (Australia)

Australian Inventory of Chemical Substances (AICS)

All ingredients are listed or exempt from listing.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Complete revision of the safety data sheet.

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Carc.	Carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LEL	Lower explosion limit (LEL)
LOEC	Lowest Observed Effect Concentration
NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
Repr.	Reproductive toxicity
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
TWA	Time-weighted average
UEL	Upper explosion limit (UEL)
UN RTDG	UN Recommendations on the Transport of Dangerous Good
vPvB	Very Persistent and very Bioaccumulative
WES	Safe Work Australia: Workplace exposure standards for airborne contaminants

Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H351	Suspected of causing cancer.
H360D	May damage the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.