

Safety data sheet

Page: 1/14

BASF Safety data sheet
Date / Revised: 31.01.2025
Product: **Tepat**

Version: 4.0

(30686514/SDS_CPA_SG/EN)

Date of print: 29.04.2026

1. Substance/preparation and manufacturer/supplier identification

Product name:

Tepat

Use: crop protection product, herbicide

Manufacturer/supplier:

BASF South East Asia Pte Ltd.
128 Beach Road #18-01
Guoco Midtown, 189773, Singapore
Telephone: +65 8322 4420
Telefax number: +65 6 334-0330
E-mail address: benny.zou@basf.com

Emergency information:

Singapore Emergency Toll-Free Number:
Telephone: +65 31638374
International emergency number:
Telephone: +49 180 2273-112

2. Hazard identification

Classification of the substance and mixture:

Acute toxicity: Cat.5 (oral)

Acute toxicity: Cat.4 (Inhalation - mist)

Acute toxicity: Cat.5 (dermal)

Serious eye damage/eye irritation: Cat.2A

Reproductive toxicity: Cat.1B (fertility)

Reproductive toxicity: Cat.2 (unborn child)

Specific target organ toxicity — single exposure (Nervous system): Cat.1

Specific target organ toxicity — repeated exposure (Nervous system): Cat.2

Hazardous to the aquatic environment - acute: Cat.2

Hazardous to the aquatic environment - chronic: Cat.2

Label elements and precautionary statement:

Pictogram:



Signal Word:

Danger

Hazard Statement:

H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H360	May damage fertility. Suspected of damaging the unborn child.
H303 + H313	May be harmful if swallowed or in contact with skin.
H370	Causes damage to organs (Nervous system).
H373	May cause damage to organs (Nervous system) through prolonged or repeated exposure.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statement:

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.

Precautionary Statements (Prevention):

P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing and eye protection or face protection.
P260	Do not breathe dust/gas/mist/vapours.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P270	Do not eat, drink or smoke when using this product.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P308 + P311	IF exposed or concerned: Call a POISON CENTER or physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P313	IF exposed or concerned: Get medical attention.
P302 + P312	IF ON SKIN: Call a POISON CENTER or a doctor/physician if you feel unwell.
P391	Collect spillage.
P337 + P313	If eye irritation persists: Get medical attention.

Precautionary Statements (Storage):

P405	Store locked up.
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Precautionary Statements (Disposal):

BASF Safety data sheet
 Date / Revised: 31.01.2025
 Product: **Tepat**

Version: 4.0

(30686514/SDS_CPA_SG/EN)

Date of print: 29.04.2026

P501 Dispose of contents and container to hazardous or special waste collection point.

Other hazards which do not result in classification:

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition/information on ingredients

Chemical nature

Substance nature: mixture

crop protection product, herbicide, Soluble concentrate (SL)

Hazardous ingredients

Butanoic acid, 2-amino-4-(hydroxymethylphosphinyl)-, monoammonium salt

Content (W/W): 5.67 %

CAS Number: 77182-82-2

Acute Tox.: Cat. 4 (Inhalation - dust)

Acute Tox.: Cat. 4 (oral)

Acute Tox.: Cat. 4 (dermal)

Repr.: Cat. 1B (fertility)

Repr.: Cat. 2 (unborn child)

STOT SE (Nervous system): Cat. 1

STOT RE (Nervous system): Cat. 2

Aquatic Acute: Cat. 1

Aquatic Chronic: Cat. 1

M-factor acute: 1

M-factor chronic: 1

Alcohols, C12-14, ethoxylated, sulfates, sodium salts (> 1 < 2.5 mol EO)

Content (W/W): < 50 %

CAS Number: 68891-38-3

Skin Irrit.: Cat. 2

Eye Dam.: Cat. 1

Aquatic Acute: Cat. 2

1-methoxypropan-2-ol

Content (W/W): < 20 %

CAS Number: 107-98-2

Flam. Liq.: Cat. 3

Acute Tox.: Cat. 5 (oral)

STOT SE: Cat. 3 (drowsiness and dizziness)

Ethanol, 2,2'-iminobis-, N-C12-18-alkyl derivs.

BASF Safety data sheet
Date / Revised: 31.01.2025
Product: **Tepat**

Version: 4.0

(30686514/SDS_CPA_SG/EN)

Date of print: 29.04.2026

Content (W/W): < 0.5 %
CAS Number: 71786-60-2

Acute Tox.: Cat. 4 (oral)
Skin Corr./Irrit.: Cat. 1B
Eye Dam./Irrit.: Cat. 1
Aquatic Acute: Cat. 1
Aquatic Chronic: Cat. 1
M-factor acute: 10
M-factor chronic: 10

sodium hydrogencarbonate
Content (W/W): < 5 %
CAS Number: 144-55-8

4. First-Aid Measures

General advice:

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing. Symptoms of poisoning may occur even after several hours, continue medical observation for at least 48 hours after the accident.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

On contact with eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Do not induce vomiting. Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Note to physician:

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., vomiting, diarrhea, abdominal cramps, tremors, hypotension (low blood pressure), weakness, unconsciousness, coma, convulsions, respiratory arrest, nausea, tachycardia, Symptoms may be delayed for several hours.

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote. Administer activated charcoal. If necessary, give oxygen. Monitor respiratory, cardiac and central nervous system. Medical monitoring for at least 24-48 hours.

5. Fire-Fighting Measures

Suitable extinguishing media:

water spray, foam, carbon dioxide, dry powder

Unsuitable extinguishing media for safety reasons:

water jet

BASF Safety data sheet
Date / Revised: 31.01.2025
Product: **Tepat**

Version: 4.0

(30686514/SDS_CPA_SG/EN)

Date of print: 29.04.2026

Specific hazards:

carbon monoxide, carbon dioxide, nitrogen oxides, phosphorus oxides, sulfur oxides
The substances/groups of substances mentioned can be released in case of fire.

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Keep containers cool by spraying with water if exposed to fire. In case of fire and/or explosion do not breathe fumes. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental Release Measures

Personal precautions:

Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions:

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Methods for cleaning up or taking up:

For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).

For large amounts: Dike spillage. Pump off product.

Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Wear suitable protective equipment.

7. Handling and Storage

Handling

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

Storage

Segregate from foods and animal feeds.

Further information on storage conditions: Keep away from heat. Protect from direct sunlight.

Storage stability:

Storage temperature: 25 °C

Storage duration: 24 Months

8. Exposure controls and personal protection

Components with occupational exposure limits

1-methoxypropan-2-ol, 107-98-2;

TWA value 50 ppm (ACGIHTLV)

STEL value 100 ppm (ACGIHTLV)

TWA value 369 mg/m³ ; 100 ppm (OEL (SG))

STEL value 553 mg/m³ ; 150 ppm (OEL (SG))

Butanoic acid, 2-amino-4-(hydroxymethylphosphinyl)-, monoammonium salt, 77182-82-2;

TWA value 0.33 mg/m³ (BASF recomm. occupational exposure limit)

Personal protective equipment

Respiratory protection:

Suitable respiratory protection for lower concentrations or short-term effect: Combination filter for gases/vapours of organic, inorganic, acid inorganic, alkaline compounds and toxic particles (e. g. EN 14387 Type ABEK-P3)

Hand protection:

Suitable chemical resistant safety gloves (EN ISO 374-1) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures:

The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form: liquid
Colour: violet
Odour: aromatic
Odour threshold: Not determined due to potential health hazard by inhalation.

pH value: approx. 6 - 9
(23 °C)
(undiluted)

BASF Safety data sheet
 Date / Revised: 31.01.2025
 Product: **Tepat**

Version: 4.0

(30686514/SDS_CPA_SG/EN)

Date of print: 29.04.2026

Melting point:	The product has not been tested.	
Boiling point:	97 °C (1,013 hPa)	(calculated)
Flash point:	> 62 °C UN L.2 Sustained combustibility, The product does not burn self-sustainingly.	(Directive 84/449/EEC, A.9)
Evaporation rate:	not applicable	
Flammability (solid/gas):	not applicable	
Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	
Ignition temperature:	440 °C	(Directive 84/449/EEC, A.15)
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
SADT:	No data available.	
Explosion hazard:	not explosive	(Directive 84/449/EEC, A.14)
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.	
Vapour pressure:	approx. 23 hPa (20 °C) Information applies to the solvent.	
Density:	approx. 1.06 g/cm ³ (20 °C)	(Directive 84/449/EEC, A.3)
Relative density:	No data available.	
Relative vapour density (air):	not applicable	
Solubility in water:	miscible (20 °C)	
Partitioning coefficient n-octanol/water (log Pow):	not applicable for mixtures	
Viscosity, dynamic:	76 mPa.s (20 °C)	(DIN 53019)

BASF Safety data sheet
Date / Revised: 31.01.2025
Product: **Tepat**

Version: 4.0

(30686514/SDS_CPA_SG/EN)

Date of print: 29.04.2026

Viscosity, kinematic:
No data available.

Other Information:
If necessary, information on other physical and chemical parameters is indicated in this section.

Particle characteristics

Particle size distribution: The substance / product is marketed or used in a non solid or granular form. -

Specific Surface Area:
No data available.

Particle Shape:
No data available.

Dustiness:
No data available.

10. Stability and Reactivity

Conditions to avoid:
See SDS section 7 - Handling and storage.

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Substances to avoid:
strong acids, strong bases, strong oxidizing agents

Hazardous reactions:
No hazardous reactions if stored and handled as prescribed/indicated.

Hazardous decomposition products:
ammonia

Chemical stability:
The product is stable if stored and handled as prescribed/indicated.

Reactivity:
No hazardous reactions if stored and handled as prescribed/indicated.

11. Toxicological Information

Routes of exposure

Acute oral toxicity

Experimental/calculated data:
LD50rat (oral): 3,788 mg/kg (OECD Guideline 401)

Acute inhalation toxicity

LC50 rat (by inhalation): 2.01 mg/l 4 h (OECD Guideline 403)
An aerosol was tested.

Acute dermal toxicity

LD50 rat (dermal): > 2,000 - < 4,000 mg/kg (OECD Guideline 402)

Assessment of acute toxicity

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Of low toxicity after single ingestion. Of low toxicity after short-term skin contact. Of moderate toxicity after short-term inhalation.

Symptoms

Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.
vomiting diarrhea abdominal cramps tremors hypotension (low blood pressure) weakness
unconsciousness coma convulsions respiratory arrest nausea tachycardia Symptoms may be delayed for several hours.

Irritation

Assessment of irritating effects:

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Not irritating to the skin. Eye contact causes irritation.

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

Serious eye damage/irritation rabbit: Irritant.

Respiratory/Skin sensitization

Assessment of sensitization:

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. There is no evidence of a skin-sensitizing potential.

Experimental/calculated data:

modified Buehler test guinea pig: Non-sensitizing. (other)

Germ cell mutagenicity

Assessment of mutagenicity:

The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity

Assessment of carcinogenicity:

The product has not been tested. The statement has been derived from the properties of the individual components. The results of various animal studies gave no indication of a carcinogenic effect.

Experimental/calculated data:

No data available.

Reproductive toxicity

Assessment of reproduction toxicity:

The product has not been tested. The statement has been derived from the properties of the individual components.

Experimental/calculated data:
No data available.

Information on: glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate

Assessment of reproduction toxicity:

Causes impairment of fertility in laboratory animals.

Developmental toxicity

Assessment of teratogenicity:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate

Assessment of teratogenicity:

The substance did not cause malformations in animal studies; however, toxicity to development was observed at doses that were toxic to the parental animals.

Specific target organ toxicity (single exposure)

A single exposure may have relevant toxic effects on organs.

Target organ: Nervous system

Remarks: The product has not been tested. The statement has been derived from the properties of the individual components.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

The product has not been tested. The statement has been derived from the properties of the individual components.

Experimental/calculated data:
No data available.

Information on: glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate

Assessment of repeated dose toxicity:

Prolonged or repeated exposure may cause neurological disturbances.

Information on: 1-methoxypropan-2-ol

Assessment of repeated dose toxicity:

No adverse effects were observed after repeated dermal exposure in animal studies. The substance may cause damage to the liver after repeated inhalation of high doses. The substance may cause damage to the liver after repeated ingestion of high doses, as shown in animal studies.

Aspiration hazard

not applicable

Other relevant toxicity information

Misuse can be harmful to health.

12. Ecological Information

Ecotoxicity

Assessment of aquatic toxicity:

Toxic to aquatic life with long lasting effects.

The product has not been tested. The statement has been derived from the properties of the individual components.

Toxicity to fish:

No data available.

Aquatic invertebrates:

No data available.

Aquatic plants:

EC50 (72 h) 36 mg/l, *Desmodesmus subspicatus*

Microorganisms/Effect on activated sludge:

No data available.

Chronic toxicity to fish:

No data available.

Chronic toxicity to aquatic invertebrates:

No data available.

Information on: glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate

Toxicity to fish:

LC50 (96 h) 461 mg/l, *Pimephales promelas*

Information on: glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate

Aquatic invertebrates:

EC50 (48 h) > 100 mg/l, *Daphnia magna*

Information on: glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate

Aquatic plants:

EC50 (72 h) 0.132 mg/l (growth rate), *Anabaena flos-aquae*

No observed effect concentration (72 h) 0.039 mg/l, *Anabaena flos-aquae*

Mobility

Assessment transport between environmental compartments:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate

Assessment transport between environmental compartments:

Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate

Assessment biodegradation and elimination (H₂O):

Not readily biodegradable (by OECD criteria).

Bioaccumulation potential

Assessment bioaccumulation potential:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate

Bioaccumulation potential:

Bioconcentration factor: < 1, *Lepomis macrochirus*

Does not accumulate in organisms.

Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

13. Disposal Considerations

Must be sent to a suitable incineration plant, observing local regulations.

Contaminated packaging:

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

BASF Safety data sheet
Date / Revised: 31.01.2025
Product: **Tepat**

Version: 4.0

(30686514/SDS_CPA_SG/EN)

Date of print: 29.04.2026

14. Transport Information

Domestic transport:

UN number or ID number: UN 3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (GLUFOSINATE AMMONIUM)
Transport hazard class(es): 9, EHS
Packing group: III
Environmental hazards: yes
Special precautions for user: None known

Sea transport

IMDG

UN number or ID number: UN 3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (GLUFOSINATE AMMONIUM)
Transport hazard class(es): 9, EHS
Packing group: III
Environmental hazards: yes
Marine pollutant: YES
Special precautions for user: EmS: F-A; S-F

Air transport

IATA/ICAO

UN number or ID number: UN 3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (GLUFOSINATE AMMONIUM)
Transport hazard class(es): 9, EHS
Packing group: III
Environmental hazards: yes
Special precautions for user: None known

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

Further information

Product may be shipped as non-hazardous in suitable packages containing a net quantity of 5 L or less under the provisions of various regulatory agencies: ADR, RID, ADN: Special Provision 375; IMDG: 2.10.2.7; IATA: A197; TDG: Special Provision 99(2); 49CFR: §171.4 (c) (2) and also the Special Provision 375 in Appendix B which is regulated in China "Regulations Concerning Road

Transportation of Dangerous Goods Part 3: Index of dangerous goods name and transportation requirements" (JT/T 617.3)

15. Regulatory Information

Other regulations

To avoid risks to man and the environment, comply with the instructions for use.

16. Other Information

Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.