

Safety data sheet

Page: 1/14

BASF Safety data sheet
Date / Revised: 03.01.2024
Product: **Autonomy Herbicide**

Version: 4.0

(30777227/SDS_CPA_SG/EN)

Date of print: 19.04.2024

1. Substance/preparation and manufacturer/supplier identification

Product name: Autonomy Herbicide

Use: crop protection product, herbicide

Manufacturer/supplier:

BASF South East Asia Pte Ltd.
128 Beach Road #18-01
Guoco Midtown, 189773, Singapore
Telephone: +65 6 337-0330
Telefax number: +65 6 334-0330
E-mail address: xinhui.khaw@basf.com

Emergency information:

Singapore Emergency Toll-Free Number:
Telephone: 1800-723-1361
International emergency number:
Telephone: +49 180 2273-112

2. Hazard identification

Classification of the substance and mixture:

Acute toxicity: Cat.4 (Inhalation - mist)

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

Serious eye damage: Cat.1

Skin irritation: Cat.2

Label elements and precautionary statement:

Pictogram:



Signal Word:

Danger

Hazard Statement:

H318	Causes serious eye damage.
H315	Causes skin irritation.
H332	Harmful if inhaled.
H360	May damage fertility. Suspected of damaging the unborn child.
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):

P310	Immediately 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 + P352	IF ON SKIN: Wash with plenty of soap and water.
P391	Collect spillage.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Storage):

P405	Store locked up.
------	------------------

Precautionary Statements (Disposal):

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): 24.5 %
 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): < 20 %
 CAS Number: 68891-38-3
 Skin Corr./Irrit.: Cat. 2
 Eye Dam./Irrit.: Cat. 1
 Aquatic Acute: Cat. 2
 Aquatic Chronic: Cat. 3

D-Glucopyranose, oligomers, decyl octyl glycosides
 Content (W/W): < 10 %
 CAS Number: 68515-73-1
 Eye Dam./Irrit.: Cat. 1
 Aquatic Acute: Cat. 3

| 2-Propanol, 1-methoxy-
 Content (W/W): < 5 %
 CAS Number: 107-98-2
 Asp. Tox.: Cat. 2
 Flam. Liq.: Cat. 3
 Acute Tox.: Cat. 5 (Inhalation - vapour)
 Acute Tox.: Cat. 5 (oral)
 Acute Tox.: Cat. 5 (dermal)
 STOT SE: Cat. 3 (drowsiness and dizziness)

| (OLIGOMER) Alcohols, C12-14, ethoxylated (> 1 < 2.5 mol EO)

BASF Safety data sheet
Date / Revised: 03.01.2024
Product: **Autonomy Herbicide**

Version: 4.0

(30777227/SDS_CPA_SG/EN)

Date of print: 19.04.2024

Content (W/W): < 2 %
CAS Number: 68439-50-9

Aquatic Acute: Cat. 1
Aquatic Chronic: Cat. 2
M-factor acute: 10

dipropylene glycol

Content (W/W): < 15 %
CAS Number: 25265-71-8

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.

Hazards: 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. (Further) symptoms and / or effects are not known so far

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, dry powder, foam, carbon dioxide

Unsuitable extinguishing media for safety reasons:

water jet

BASF Safety data sheet
Date / Revised: 03.01.2024
Product: **Autonomy Herbicide**

Version: 4.0

(30777227/SDS_CPA_SG/EN)

Date of print: 19.04.2024

Specific hazards:

carbon monoxide, carbon dioxide, sulfur oxides, nitrogen oxides, phosphorus 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:

Vapours may form ignitable mixture with air. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Storage

Segregate from foods and animal feeds.

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

Storage stability:

Storage duration: 36 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:

Tightly fitting safety goggles (splash 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: red
Odour: characteristic
Odour threshold: Not determined since harmful by inhalation.

pH value: approx. 6.6 - 7.8
(100 %(m), 23 °C)

BASF Safety data sheet
Date / Revised: 03.01.2024
Product: **Autonomy Herbicide**

Version: 4.0

(30777227/SDS_CPA_SG/EN)

Date of print: 19.04.2024

Melting point:	0 °C Information applies to the solvent.
Boiling point:	100 °C Information applies to the solvent.
Flash point:	> 93.3 °C
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:	Based on the water content the product does not ignite.
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Explosion hazard:	Based on the chemical structure there is no indication of explosive properties.
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.
Vapour pressure:	The product has not been tested.
Density:	approx. 1.14 g/cm ³ (20 °C)
Relative vapour density (air):	not applicable
Solubility in water:	miscible
Partitioning coefficient n-octanol/water (log Pow):	not applicable
Viscosity, dynamic:	approx. < 300 mPa.s (20 °C)

Other Information:

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

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

Assessment of acute toxicity

| Of moderate toxicity after short-term inhalation. Virtually nontoxic after a single skin contact. Virtually nontoxic after a single ingestion. 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

Acute oral toxicity

Experimental/calculated data:

| LD50 rat (oral): > 1,510 mg/kg (Conventional method)

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

Acute inhalation toxicity

Experimental/calculated data:

| LC50 rat (by inhalation): 1.26 mg/l 4 h (Conventional method)

| Tested as dust aerosol.

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

Acute dermal toxicity

Experimental/calculated data:

LD50 rabbit (dermal): 2,000 mg/kg bw (Conventional method)

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:

| May cause severe damage to the eyes. Skin contact causes irritation. 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

Experimental/calculated data:

| Skin corrosion/irritation rabbit: non-irritant

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

Experimental/calculated data:

| Skin corrosion/irritation In vitro assay: Irritant. (OECD Guideline 439)

Skin corrosion/irritation rabbit: Irritant. (OECD Guideline 404)

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

Experimental/calculated data:

| Serious eye damage/irritation rabbit: non-irritant (EPA Guideline)

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

Experimental/calculated data:

| Serious eye damage/irritation In vitro assay: no irreversible damage (BCOP)

Serious eye damage/irritation rabbit: irreversible damage (OECD Guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:

| No sensitizing effect. 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

Experimental/calculated data:

Buehler test guinea pig: Non-sensitizing.

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.

Reproductive toxicity**Assessment of reproduction toxicity:**

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 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.

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

Assessment of repeated dose toxicity:

Prolonged or repeated exposure may cause neurological disturbances.

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.

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

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

Chronic toxicity to fish:

No observed effect concentration (35 d) 26.2 mg/l, Pimephales promelas

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

Chronic toxicity to aquatic invertebrates:

No observed effect concentration (21 d), 18 mg/l, Daphnia magna (other, semistatic)

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.

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

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.