

Safety data sheet

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BASF Safety data sheet
Date / Revised: 09.03.2023
Product: **Frequency® Herbicide**

Version: 1.0

(30800530/SDS_CPA_AU/EN)

Date of print: 14.03.2023

1. Substance/preparation and manufacturer/supplier identification

Product name:
Frequency® Herbicide

Use: crop protection product, herbicide

Manufacturer/supplier:

BASF Australia Limited (ABN 62 008 437 867)
Level 12, 28 Freshwater Place Southbank
Victoria 3006, AUSTRALIA
Telephone: +61 3 8855-6600
Telefax number: +61 3 8855-6511

Emergency information:

BASF Emergency Advice Number: 1800 803 440 (24h) [within Australia]
BASF Emergency Advice Number: + 61 3 8855 6666 [outside Australia]

2. Hazard identification

Classification of the substance and mixture:

Skin corrosion/irritation: Cat.2
Serious eye damage/eye irritation: Cat.2A
Skin sensitization: Cat.1B
Reproductive toxicity: Cat.1B (unborn child)
Hazardous to the aquatic environment - acute: Cat.1
Hazardous to the aquatic environment - chronic: Cat.1

Label elements and precautionary statement:

Pictogram:



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Signal Word:
Danger

Hazard Statement:

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H360	May damage the unborn child.
H400	Very toxic to aquatic life.
H410	Very 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):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P261	Avoid breathing mist or vapour or spray.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P272	Contaminated work clothing should not be allowed out of the workplace.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical attention.
P308 + P313	IF exposed or concerned: Get medical attention.
P391	Collect spillage.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P337 + P313	If eye irritation persists: Get medical attention.

Precautionary Statements (Storage):

P405	Store locked up.
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Precautionary Statements (Disposal):

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

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crop protection product, herbicide

Hazardous ingredients

Topramezone

Content (W/W): 5.92 %
CAS Number: 210631-68-8

Repr.: Cat. 1B (unborn child)
Aquatic Acute: Cat. 1
Aquatic Chronic: Cat. 1
M-factor acute: 1
M-factor chronic: 100

cloquintocet-mexyl (ISO); 1-methylhexyl (5-chloroquinolin-8-yloxy)acetat

Content (W/W): 5.92 %
CAS Number: 99607-70-2

Skin Sens.: Cat. 1
Aquatic Acute: Cat. 1
Aquatic Chronic: Cat. 1

solvent naphtha

Content (W/W): < 25 %
CAS Number: 64742-94-5

Asp. Tox.: Cat. 1
Aquatic Acute: Cat. 2
Aquatic Chronic: Cat. 2

2-ethylhexan-1-ol

Content (W/W): < 15 %
CAS Number: 104-76-7

Flam. Liq.: Cat. 4
Acute Tox.: Cat. 5 (oral)
Acute Tox.: Cat. 4 (Inhalation - mist)
Skin Corr./Irrit.: Cat. 2
Eye Dam./Irrit.: Cat. 2A
STOT SE: Cat. 3 (irr. to respiratory syst.)
Aquatic Acute: Cat. 3

propane-1,2-diol

Content (W/W): < 10 %
CAS Number: 57-55-6

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.

If inhaled:

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

On skin contact:

Immediately wash thoroughly with soap and water, seek medical attention.

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On contact with eyes:

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

On ingestion:

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

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Suitable extinguishing media:

water spray, dry powder, foam, carbon dioxide

Unsuitable extinguishing media for safety reasons:

water jet

Specific hazards:

carbon monoxide, hydrogen chloride, carbon dioxide, nitrogen oxides, sulfur oxides, halogenated compounds

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: 24 Months

Protect from temperatures below: -5 °C

Changes in the properties of the product may occur if substance/product is stored below indicated temperature for extended periods of time.

Protect from temperatures above: 40 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

8. Exposure controls and personal protection

Components with occupational exposure limits

propane-1,2-diol, 57-55-6;

TWA value 474 mg/m³ ; 150 ppm (AU NOEL), Total vapour and particulates

TWA value 10 mg/m³ (AU NOEL), Particulate

TWA value 474 mg/m³ ; 150 ppm (OEL (AU)), Total vapour and particulates

TWA value 10 mg/m³ (OEL (AU)), Particulate

2-ethylhexan-1-ol, 104-76-7;

TWA value 5 ppm (ACGIHTLV)

solvent naphtha, 64742-94-5;

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Skin Designation (ACGIHTLV), Non-aerosol
Measured as: total hydrocarbon vapor
Danger of cutaneous absorption
TWA value 200 mg/m³ (ACGIHTLV), Non-aerosol
Measured as: total hydrocarbon vapor
Application restricted to conditions in which there are negligible aerosol exposures.

Naphthalene, 1-methyl-, 90-12-0;
TWA value 0.5 ppm (ACGIHTLV)
Skin Designation (ACGIHTLV)
Danger of cutaneous absorption

Naphthalene, 2-methyl-, 91-57-6;
TWA value 0.5 ppm (ACGIHTLV)
Skin Designation (ACGIHTLV)
The substance can be absorbed through the skin.
Skin Designation (ACGIHTLV)
Danger of cutaneous absorption
TWA value 0.5 ppm (ACGIHTLV)

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: white to light beige

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Odour:	aromatic
Odour threshold:	Not determined due to potential health hazard by inhalation.
pH value:	approx. 4 - 6 (23 °C) (undiluted)
Melting point:	approx. 0 °C Information applies to the solvent.
Boiling point:	approx. 100 °C Information applies to the solvent.
Flash point:	143 °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:	440 °C
Thermal decomposition:	170 °C , 50 kJ/kg (onset temperature)
Explosion hazard:	Not a substance liable to self-decomposition according to UN transport regulations, class 4.1. not explosive
Fire promoting properties:	not fire-propagating
Vapour pressure:	The product has not been tested.
Density:	approx. 1.01 g/cm ³ (20 °C)
Relative vapour density (air):	not applicable
Solubility in water:	soluble
Partitioning coefficient n-octanol/water (log Pow):	not applicable

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Viscosity, dynamic: approx. 92 mPa.s
(20 °C, 100 1/s)
Viscosity, kinematic: approx. 110.9 mm²/s
(40 °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: 170 °C, 50 kJ/kg
(onset temperature)

Thermal decomposition: Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.

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:

No hazardous decomposition products if stored and handled as prescribed/indicated.

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): > 2,000 mg/kg (OECD Guideline 423)

No mortality was observed.

Acute inhalation toxicity

LC50 rat (by inhalation): > 2.84 mg/l 4 h (OECD Guideline 436)

No mortality was observed. Highest concentration technically achievable. An aerosol was tested.

Acute dermal toxicity

LD50 rat (dermal): > 5,000 mg/kg (OECD Guideline 402)

Assessment of acute toxicity

Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

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

Irritation

Assessment of irritating effects:

Skin contact causes irritation. Eye contact causes irritation. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:

Skin corrosion/irritation rabbit:

Information on: 2-ethylhexan-1-ol

Experimental/calculated data:

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

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

Respiratory/Skin sensitization

Assessment of sensitization:

Sensitization after skin contact possible. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:

Mouse Local Lymph Node Assay (LLNA) mouse: (OECD Guideline 429)

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.

Information on: Topramezone

Assessment of carcinogenicity:

In long-term studies in rats the substance induced thyroid tumors. The effect is caused by an animal specific mechanism that has no human counter part. In long-term studies in mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Assessment of reproduction toxicity:

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

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: Topramezone

Assessment of teratogenicity:

The substance caused malformations/developmental toxicity in laboratory animals.

Specific target organ toxicity (single exposure)

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

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: Topramezone

Assessment of repeated dose toxicity:

Adaptive effects were observed after repeated exposure in animal studies.

Aspiration hazard

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

Other relevant toxicity information

Misuse can be harmful to health.

12. Ecological Information

Ecotoxicity

Assessment of aquatic toxicity:

Very toxic to aquatic life with long lasting effects.

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic invertebrates:

EC50 (48 h) 3.03 mg/l, *Daphnia magna*

Aquatic plants:

EC50 (72 h) 5.39 mg/l (growth rate), *Pseudokirchneriella subcapitata*

EC10 (72 h) 3.19 mg/l (growth rate), *Pseudokirchneriella subcapitata*

EC50 (7 d) 0.775 mg/l (growth rate), *Lemna gibba*

EC10 (7 d) 0.03 mg/l (growth rate), *Lemna gibba*

Information on: cloquintocet-mexyl (ISO); 1-methylhexyl (5-chloroquinolin-8-yloxy)acetat

Toxicity to fish:

LC50 (96 h) > 51 mg/l, *Lepomis* sp.

LC50 (96 h) > 76 mg/l, *Oncorhynchus mykiss*

LC50 (96 h) 14 mg/l, *Ictalurus catus*

Information on: Topramezone

Toxicity to fish:

LC50 (96 h) > 100 mg/l, *Oncorhynchus mykiss* (Directive 92/69/EEC, C.1, static)

Nominal concentration.

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: cloquintocet-mexyl (ISO); 1-methylhexyl (5-chloroquinolin-8-yloxy)acetat

Assessment transport between environmental compartments:

Adsorption to solid soil phase is not expected.

Information on: Topramezone

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: cloquintocet-mexyl (ISO); 1-methylhexyl (5-chloroquinolin-8-yloxy)acetat

Assessment biodegradation and elimination (H₂O):

Not readily biodegradable (by OECD criteria).

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Information on: Topramezone
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: cloquintocet-mexyl (ISO); 1-methylhexyl (5-chloroquinolin-8-yloxy)acetat

Information on: Topramezone
Bioaccumulation potential:
Bioconcentration factor: 0.69 (42 d), *Lepomis macrochirus* (OPPTS 850.1730 (EPA Guideline))
Does not significantly 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. (TOPRAMEZONE, CLOQUINTOCET-MEXYL)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

Further information

Hazchem Code:3Z
IERG Number:47

Sea transport

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IMDG

UN number or ID number: UN 3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TOPRAMEZONE, CLOQUINTOCET-MEXYL)
Transport hazard class(es): 9, EHSM
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. (TOPRAMEZONE, CLOQUINTOCET-MEXYL)
Transport hazard class(es): 9, EHSM
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.

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP): Schedule 5

APVMA Approval No.: 86267

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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.