

SAFETY DATA SHEET



Calypso

Version 2 / NZ
102000007569

1/11

Revision Date: 10.08.2022
Print Date: 10.08.2022

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name Calypso
Product code (UVP) 05302064

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

Use Insecticide
EPA-Nr. HSR000715

1.3 Details of the supplier of the safety data sheet

Supplier Bayer New Zealand Limited
Crop Science Division
B:HIVE Building
74 Taharoto Rd
Smales Farm
Takapuna
Auckland, 0622
New Zealand
Telephone 0800 428 246
Telefax (09) 441 8645

1.4 Emergency telephone no.

Emergency Number 0800 734 607 (24hr)
Global Incident Response Hotline (24h) +1 (760) 476-3964 (Company 3E for Bayer AG, Crop Science Division)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classified as hazardous according to the criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2020 as amended

6.1 D
H302 Harmful if swallowed.
6.7 B
H351 Suspected of causing cancer.
6.8 B
H361 Suspected of damaging fertility or the unborn child.

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- 6.9 B
H373 May cause damage to organs through prolonged or repeated exposure.
- 9.1 A
H410 Very toxic to aquatic life with long lasting effects.
- 9.2 C
H423 Harmful to the soil environment.
- 9.3 B
H432 Toxic to terrestrial vertebrates.
- 9.4 C
H443 Harmful to terrestrial invertebrates.

2.2 Label elements

Labelling in accordance with the Hazardous Substances (Safety Data Sheets) Notice 2020 as amended

Hazard label for supply/use required.



Signal word: Warning

Hazard statements

- H302 Harmful if swallowed.
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.
H423 Harmful to the soil environment.
H432 Toxic to terrestrial vertebrates.
H443 Harmful to terrestrial invertebrates.

Precautionary statements

- P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.
P391 Collect spillage.
P501 Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

No additional hazards known beside those mentioned.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature

Suspension concentrate (=flowable concentrate)(SC)

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Thiacloprid 480 g/l

Hazardous components

| Chemical name | CAS-No. | Conc. [%] |
|--|-------------|---------------------|
| Thiacloprid | 111988-49-9 | 40.3 |
| 1,2-Benzisothiazol-3(2H)-one | 2634-33-5 | > 0.01 – < 0.05 |
| reaction mass of 5-chloro-2- methyl-2H- isothiazol-3-one and 2-methyl-2H-isothiazol-3- one (3:1) | 55965-84-9 | > 0.0002 – < 0.0015 |
| Urea | 57-13-6 | > 1 |

Further information

| | | |
|----------------------------------|-----------|----------------------|
| 1,2-Benzisothiazol- 3(2H)-one | 2634-33-5 | M-Factor: 10 (acute) |
|----------------------------------|-----------|----------------------|

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

| | |
|-----------------------|--|
| General advice | Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely. |
| Inhalation | Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately. |
| Skin contact | Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician. |
| Eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists. |
| Ingestion | Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately. |

4.2 Most important symptoms and effects, both acute and delayed

| | |
|-----------------|--|
| Symptoms | If large amounts are ingested, the following symptoms may occur: Nausea, Vomiting, Diarrhoea, Salivation, Headache, Dizziness, Confusion, Restlessness, Bradycardia, tachycardia, Coma, hypotension, Respiratory paralysis Symptoms and hazards refer to effects observed after intake of significant amounts of the active ingredient(s). |
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4.3 Indication of any immediate medical attention and special treatment needed

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Treatment Treat symptomatically. Monitor: respiratory and cardiac functions. Oxygen or artificial respiration if needed. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote.

Contact the National Poisons and Hazardous Chemicals Information center in Dunedin, PO Box 913, Dunedin. Phone 0800 POISON (0800 764 766).

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Water spray, Carbon dioxide (CO₂), Foam, Sand

5.2 Special hazards arising from the substance or mixture In the event of fire the following may be released: Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Nitrogen oxides (NO_x), Sulphur oxides

5.3 Advice for firefighters

Special protective equipment for firefighters In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

Further information Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

6.2 Environmental precautions Do not allow to get into surface water, drains and ground water.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling Use only in area provided with appropriate exhaust ventilation.

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Hygiene measures Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands immediately after work, if necessary take a shower. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Keep away from direct sunlight.

Advice on common storage Keep away from food, drink and animal feedingstuffs.

Suitable materials HDPE (high density polyethylene)

7.3 Specific end use(s) Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

| Components | CAS-No. | Control parameters | Update | Basis |
|-------------|-------------|---------------------------------|--------|----------|
| Thiacloprid | 111988-49-9 | 0.34 mg/m ³ (TWA) | | OES BCS* |
| Urea | 57-13-6 | 10 mg/m ³ (TWA) | | OES BCS* |

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

8.2 Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection If product is handled while not enclosed, and if contact may occur: Wear respirator with an organic vapours and gas filter mask (protection factor 10) conforming to EN140 type A or equivalent. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

Hand protection

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.

| | |
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| Material | Nitrile rubber |
| Break through time | > 480 min |
| Glove thickness | > 0.4 mm |

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| | Protective index Directive | Class 6 Protective gloves complying with EN 374. |
| Eye protection | Wear goggles (conforming to EN166, Field of Use = 5 or equivalent). | |
| Skin and body protection | Wear standard coveralls and Category 3 Type 4 suit. If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently. If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer. | |
| General protective measures | If product is handled while not enclosed, and if contact may occur: Complete suit protecting against chemicals | |

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| | |
|---|---|
| Form | suspension |
| Colour | white to light beige |
| Odour | weak, characteristic |
| Odour Threshold | No data available |
| pH | 6.5 - 8.5 (100 %) (23 °C) |
| Melting point/range | No data available |
| Boiling point/boiling range | ca. 100 °C |
| Flash point | No flash point - Determination conducted up to the boiling point. |
| Flammability | No data available |
| Auto-ignition temperature | |
| Minimum ignition energy | No data available |
| Self-accelarating decomposition temperature (SADT) | No data available |
| Upper explosion limit | No data available |
| Lower explosion limit | No data available |
| Vapour pressure | No data available |
| Evaporation rate | No data available |
| Relative vapour density | No data available |
| Relative density | No data available |
| Density | ca. 1.19 g/cm ³ (20 °C) |

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| Water solubility | miscible |
| Partition coefficient: n-octanol/water | Thiacloprid: log Pow: 1.26 (20 °C) |
| Viscosity, dynamic | No data available |
| Viscosity, kinematic | No data available |
| Oxidizing properties | No data available |
| Explosivity | Not explosive 92/69/EEC, A.14 / OECD 113 |
| 9.2 Other information | Further safety related physical-chemical data are not known. |

SECTION 10: STABILITY AND REACTIVITY

| | |
|--|--|
| 10.1 Reactivity | Stable under normal conditions. |
| 10.2 Chemical stability | Stable under recommended storage conditions. |
| 10.3 Possibility of hazardous reactions | No hazardous reactions when stored and handled according to prescribed instructions. |
| 10.4 Conditions to avoid | Extremes of temperature and direct sunlight. |
| 10.5 Incompatible materials | Store only in the original container. |
| 10.6 Hazardous decomposition products | No decomposition products expected under normal conditions of use. |

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

| | |
|--|---|
| Acute oral toxicity | LD50 (Rat) > 300 - < 500 mg/kg |
| Acute inhalation toxicity | LC50 (Rat) > 0.989 - < 2.199 mg/l Exposure time: 4 h Determined in the form of a respirable aerosol. Irritating to respiratory system. |
| Acute dermal toxicity | LD50 (Rat) > 4,000 mg/kg |
| Skin corrosion/irritation | No skin irritation (Rabbit) |
| Serious eye damage/eye irritation | No eye irritation (Rabbit) |
| Respiratory or skin sensitisation | Skin: Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Buehler test |

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Skin: Sensitising (Guinea pig)
OECD Test Guideline 406, Magnusson & Kligman test

Assessment STOT Specific target organ toxicity – single exposure

Thiacloprid: May cause drowsiness or dizziness.

Assessment STOT Specific target organ toxicity – repeated exposure

Thiacloprid did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Thiacloprid was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Thiacloprid caused at high dose levels an increased incidence of tumours in rats in the following organ(s): Thyroid, Uterus (including cervix).

Thiacloprid caused at high dose levels an increased incidence of tumours in mice in the following organ(s): ovaries. The tumours seen with Thiacloprid were caused through a non-genotoxic mechanism, which is not relevant at low doses. The mechanism that triggers tumours in rodents is not relevant for the low exposures encountered under normal use conditions.

Assessment toxicity to reproduction

Thiacloprid caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. Thiacloprid caused difficulties in parturition in rats. The mechanism of action for this effect is not considered to be relevant to man.

Assessment developmental toxicity

Thiacloprid caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Thiacloprid are related to maternal toxicity.

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Endocrine disrupting properties

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish

LC50 (Lepomis macrochirus (Bluegill sunfish)) 80.7 mg/l
Exposure time: 96 h

Toxicity to aquatic invertebrates

EC50 (Daphnia magna (Water flea)) \geq 85.1 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient.

LC50 (Chironomus riparius (non-biting midge)) 0.032 mg/l
Exposure time: 24 h

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Toxicity to aquatic plants IC50 (Desmodesmus subspicatus (green algae)) 96.7 mg/l
Growth rate; Exposure time: 72 h
The value mentioned relates to the active ingredient.

12.2 Persistence and degradability

Biodegradability Thiacloprid:
Not rapidly biodegradable

Koc Thiacloprid: Koc: 615

12.3 Bioaccumulative potential

Bioaccumulation Thiacloprid:
Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Thiacloprid: Slightly mobile in soils

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment Thiacloprid: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

12.6 Endocrine disrupting properties

Assessment The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Additional ecological information No other effects to be mentioned.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product Dispose of this product only by using according to the label, or at an approved landfill or other approved facility.

Contaminated packaging Triple rinse containers. Recycle if possible. If allowed under local authority, burn if circumstances, especially wind direction permit, otherwise crush and bury in an approved local authority facility. Do not use container for any other purpose.

SECTION 14: TRANSPORT INFORMATION

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

ADR/RID/ADN

14.1 UN number

2902

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14.2 Proper shipping name PESTICIDE, LIQUID, TOXIC, N.O.S.
(THIACLOPRID SOLUTION)
14.3 Transport hazard class(es) 6.1
14.4 Packaging Group III
14.5 Environm. Hazardous Mark YES
Hazchem Code 2X

IMDG

14.1 UN number **2902**
14.2 Proper shipping name PESTICIDE, LIQUID, TOXIC, N.O.S.
(THIACLOPRID SOLUTION)
14.3 Transport hazard class(es) 6.1
14.4 Packaging Group III
14.5 Marine pollutant YES

IATA

14.1 UN number **2902**
14.2 Proper shipping name PESTICIDE, LIQUID, TOXIC, N.O.S.
(THIACLOPRID SOLUTION)
14.3 Transport hazard class(es) 6.1
14.4 Packaging Group III
14.5 Environm. Hazardous Mark NO

14.6 Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

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

No transport in bulk according to the IBC Code.

SECTION 15: REGULATORY INFORMATION

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

Further information

HSNO approval-Nr. HSR000715
HSNO Controls See www.epa.govt.nz
ACVM Reg. P5664
ACVM Condition See www.foodsafety.govt.nz

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE Acute toxicity estimate
CAS-Nr. Chemical Abstracts Service number
Conc. Concentration

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| | |
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| ECx | Effective concentration to x % |
| EINECS | European inventory of existing commercial substances |
| ELINCS | European list of notified chemical substances |
| EN | European Standard |
| EU | European Union |
| IATA | International Air Transport Association |
| IBC | International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code) |
| ICx | Inhibition concentration to x % |
| IMDG | International Maritime Dangerous Goods |
| LCx | Lethal concentration to x % |
| LDx | Lethal dose to x % |
| LOEC/LOEL | Lowest observed effect concentration/level |
| MARPOL | MARPOL: International Convention for the prevention of marine pollution from ships |
| N.O.S. | Not otherwise specified |
| NOEC/NOEL | No observed effect concentration/level |
| OECD | Organization for Economic Co-operation and Development |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| TWA | Time weighted average |
| UN | United Nations |
| WHO | World health organisation |

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe products in terms of their safety requirements. The above details do not imply any guarantee concerning composition, properties or performance of the product.

Reason for Revision: The following sections have been revised: Section 2: Hazards Identification.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.