



CALYPSO

Version 2 / IRL
102000007569

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Revision Date: 28.12.2017
Print Date: 09.01.2018

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

1.3 Details of the supplier of the safety data sheet

Supplier Bayer CropScience Ltd
Bayer Ltd
The Atrium, Blackthorn Road
Sandyford
Dublin 18
Ireland

Telephone +353-1-2999313

Responsible Department Email: ukinfo@bayercropscience.com

1.4 Emergency telephone no.

Emergency telephone no. 00800 1020 3333 (24 hr)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Reproductive toxicity: Category 1B
H360FD May damage fertility. May damage the unborn child.

Carcinogenicity: Category 2
H351 Suspected of causing cancer.

Acute toxicity: Category 4
H302 Harmful if swallowed.

Acute toxicity: Category 4
H332 Harmful if inhaled.

Skin sensitisation: Category 1
H317 May cause an allergic skin reaction.

Specific target organ toxicity - single exposure: Category 3
H335 May cause respiratory irritation.

Specific target organ toxicity - single exposure: Category 3
H336 May cause drowsiness or dizziness.

Acute aquatic toxicity: Category 1



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H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1

H410 Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

- Thiacloprid
- 1,2-Benzisothiazol-3(2H)-one
- Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one



Signal word: Danger

Hazard statements

H302 + H332 Harmful if swallowed or if inhaled.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H360FD May damage fertility. May damage the unborn child.
H410 Very toxic to aquatic life with long lasting effects.
EUH401 To avoid risks to human health and the environment, comply with the instructions for use.
Restricted to professional users.

Precautionary statements

P201 Obtain special instructions before use.
P261 Avoid breathing mist/ spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor/ physician.
P501 Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site, except for triple rinsed empty containers which can be disposed of as non-hazardous waste.

2.3 Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature

Suspension concentrate (=flowable concentrate)(SC)
Thiacloprid 480 g/l

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Hazard statements according to Regulation (EC) No. 1272/2008

Name	CAS-No. / EC-No. / REACH Reg. No.	Classification	Conc. [%]
		REGULATION (EC) No 1272/2008	
Thiacloprid	111988-49-9	Acute Tox. 3, H301 Acute Tox. 4, H332 Carc. 2, H351 STOT SE 3, H336 Repr. 1B, H360FD Aquatic Acute 1, H400 Aquatic Chronic 1, H410	40.3
1,2-Benzisothiazol-3(2H)-one	2634-33-5 220-120-9	Aquatic Acute 1, H400 Acute Tox. 4, H302 Eye Dam. 1, H318 Skin Irrit. 2, H315 Skin Sens. 1, H317	> 0.01 – < 0.05
Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one	55965-84-9	Acute Tox. 3, H331 Acute Tox. 3, H311 Acute Tox. 3, H301 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	> 0.0002 – < 0.0015
Urea	57-13-6 200-315-5	Not classified	> 1

Further information

Thiacloprid	111988-49-9	M-Factor: 100 (acute), 100 (chronic)
		M-Factor: 100 (acute), 100 (chronic)

For the full text of the H-Statements mentioned in this Section, see Section 16.

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.



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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).

4.3 Indication of any immediate medical attention and special treatment needed

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.

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.
If the product contaminates rivers and lakes or drains inform respective authorities.

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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.

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

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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.

Material	Nitrile rubber
Rate of permeability	> 480 min
Glove thickness	> 0.4 mm
Protective index	Class 6
Directive	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
pH	6.5 - 8.5 at 100 % (23 °C)
Boiling point/boiling range	ca. 100 °C
Flash point	No flash point - Determination conducted up to the boiling point.
Density	ca. 1.19 g/cm ³ at 20 °C
Water solubility	miscible
Partition coefficient: n-octanol/water	Thiacloprid: log Pow: 1.26 at 20 °C



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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

Thermal decomposition 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 irritation No skin irritation (Rabbit)

Eye irritation No eye irritation (Rabbit)

Sensitisation Non-sensitizing. (Guinea pig)
OECD Test Guideline 406, Buehler test
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

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

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.

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

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).

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Product It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines.

Contaminated packaging Small containers (< 10 l or < 10 kg) should be rinsed thoroughly using an integrated pressure rinsing device, or, by manually rinsing three times.
Add washings to sprayer at time of filling.
Dispose of empty and cleaned packaging safely.
Follow advice on product label and/or leaflet.

Waste key for the unused product **02 01 08*** agrochemical waste containing hazardous substances

SECTION 14: TRANSPORT INFORMATION**ADR/RID/ADN**

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 Packing group III
14.5 Environm. Hazardous Mark YES
Hazard no. 60
Tunnel Code E

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

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 Packing 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 Packing group III



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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

Republic of Ireland Regulations

This material may be subject to some or all of the following regulations (and any subsequent amendments). Users must ensure that any uses and restrictions as indicated on the label and/or leaflet are followed.

Supply and Use

European Communities (Prohibition of Certain Active Substances in Plant Protection Products) Regulations 1981 (SI No 320/1981)
European Communities (Authorization, Placing on the Market, Use and Control of Plant Protection Products) Regulations 2003 (SI No 83/2003)
European Communities (Classification, Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations 2001 (SI No 624/2001)
2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations, 2001 (SI No 619/2001)

Waste Treatment

Landfill Directive
Regulation on Substances That Deplete the Ozone Layer 1994 (EEC/3093/94)

Further information

WHO-classification: II (Moderately hazardous)

15.2 Chemical safety assessment

A chemical safety assessment is not required.

SECTION 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 3

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H332	Harmful if inhaled.

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H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H360FD	May damage fertility. May damage the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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
EC-No.	European community number
ECx	Effective concentration to x %
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
ELV	Exposure Limit Value
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
SI	Statutory Instrument
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

Reason for Revision: Safety Data Sheet according to Regulation (EU) No. 2015/830. The following sections have been revised: Section 2: Hazards Identification. Section 3: Composition / Information on Ingredients.

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

The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 2015/830 amending Regulation (EU) No 1907/2006 and any subsequent amendments. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to observe any additional national requirements.