



**CALYPSO SC480**

Version 3 / ZA  
102000007569

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Revision Date: 14.09.2016  
Print Date: 14.09.2016

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

**1.1 Product identifier**

**Trade name** CALYPSO SC480  
**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 (Pty) Ltd.  
27 Wrench Road, P.O. Box 143  
1600 Isando  
South Africa  
**Telephone** +27 (011) 921 5911  
**Telefax** +27 (011) 921 5766  
**Responsible Department** QHSE - Nigel, South Africa  
+27 (011) 365 8675 (during business hours only)

**1.4 Emergency telephone no.**

**Emergency telephone no.** +27 (0861) 555 777 (Western Cape Poisons Helpline)  
**Global Incident Response Hotline (24h)** +1 (760) 476 3964 (Company 3E for Bayer CropScience)

**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.

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

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  
H400 Very toxic to aquatic life.



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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 and 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 in accordance with local regulation.

**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

**Hazardous components**

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

Name	CAS-No. /	Classification	Conc. [%]
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	EC-No. / REACH Reg. No.	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	Eye Dam. 1, H318 Aquatic Acute 1, H400 Acute Tox. 4, H302 Skin Sens. 1, H317 Skin Irrit. 2, H315	> 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, H311 Acute Tox. 3, H301 Skin Corr. 1B, H314 Acute Tox. 3, H331 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	> 0,0002 – < 0,0015
Urea	57-13-6	Not classified	> 1

**Further information**

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

<b>General advice</b>	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
<b>Inhalation</b>	Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
<b>Skin contact</b>	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.
<b>Eye contact</b>	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.
<b>Ingestion</b>	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**

<b>Symptoms</b>	If large amounts are ingested, the following symptoms may occur: Nausea, Vomiting, Diarrhoea, Salivation, Headache, Dizziness, Confusion, Restlessness, Bradycardia, Tachycardia, Coma, Hypotension, Respiratory paralysis
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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.

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**SECTION 5: FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

**Suitable** Water spray, Carbon dioxide (CO<sub>2</sub>), 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<sub>x</sub>), 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.

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**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.

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**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

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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 <sup>3</sup> (TWA)		OES BCS*
Urea	57-13-6	10 mg/m <sup>3</sup> (TWA)		OES BCS*

\*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

**8.2 Exposure controls****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.  
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

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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**

<b>Form</b>	suspension
<b>Colour</b>	white to light beige
<b>Odour</b>	weak, characteristic
<b>pH</b>	6,5 - 8,5 at 100 % (23 °C)
<b>Boiling point/boiling range</b>	ca. 100 °C
<b>Flash point</b>	No flash point - Determination conducted up to the boiling point.
<b>Density</b>	ca. 1,19 g/cm <sup>3</sup> at 20 °C
<b>Water solubility</b>	miscible
<b>Partition coefficient: n-octanol/water</b>	Thiacloprid: log Pow: 1,26 at 20 °C
<b>Explosivity</b>	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

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	Irritating to respiratory system. Determined in the form of a respirable aerosol.
<b>Acute dermal toxicity</b>	LD50 (Rat) > 4.000 mg/kg
<b>Skin irritation</b>	No skin irritation (Rabbit)
<b>Eye irritation</b>	No eye irritation (Rabbit)
<b>Sensitisation</b>	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 – 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): 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.

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**SECTION 12: ECOLOGICAL INFORMATION****12.1 Toxicity**

<b>Toxicity to fish</b>	LC50 (Lepomis macrochirus (Bluegill sunfish)) 80,7 mg/l Exposure time: 96 h
<b>Toxicity to aquatic invertebrates</b>	EC50 (Daphnia magna (Water flea)) >= 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
<b>Toxicity to aquatic plants</b>	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:



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	Not rapidly biodegradable
<b>Koc</b>	Thiacloprid: Koc: 615
<b>12.3 Bioaccumulative potential</b>	
<b>Bioaccumulation</b>	Thiacloprid: Does not bioaccumulate.
<b>12.4 Mobility in soil</b>	
<b>Mobility in soil</b>	Thiacloprid: Slightly mobile in soils
<b>12.5 Results of PBT and vPvB assessment</b>	
<b>PBT and vPvB assessment</b>	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).
<b>12.6 Other adverse effects</b>	
<b>Additional ecological information</b>	No other effects to be mentioned.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

<b>Product</b>	In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.
<b>Contaminated packaging</b>	Not completely emptied packagings should be disposed of as hazardous waste.

**SECTION 14: TRANSPORT INFORMATION**

**SANS 10231**

14.1 UN number	<b>2902</b>
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

**IMDG**

14.1 UN number	<b>2902</b>
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	<b>2902</b>
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	NO





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**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.

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**SECTION 15: REGULATORY INFORMATION**

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

**Further information**

WHO-classification: II (Moderately hazardous)

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**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.
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
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 %



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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 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.

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