



SAFETY DATA SHEET (SDS)

TITLE: **CARBENDAZIM 500 SC**

1.0 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY / UNDERTAKING

1.1 Product Identifier

Identification on the label / Trade name : CIBA CARBENDAZIM 500 SC
Common Name : Carbendazim 500 g/l SC
Index Number : N/A
REACH registration No. : N/A

1.2 Relevant identified uses of the substance and uses advised against:

Fungicide

1.3 Details of the Manufacturer / Supplier of the safety data sheet:

Supplier CIBA AGRIPHARMA SARL
78 Boulevard Haussmann
75008 Paris , France
Tel Tel: +33 6 51 39 90 00
E-mail administration@ciba- agripharma.com
Webpage www. ciba- agripharma.com

1.4 Emergency Phone Number (24 hours)

+33 6 51 39 90 00

2.0 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.

Germ cell mutagenicity: Category 1B
H340 May cause genetic defects.

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

Acute aquatic toxicity: Category 1
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:

- Carbendazim



Signal word: Danger

Hazard statements

H340	May cause genetic defects.
H360FD	May damage fertility. May damage the unborn child.
H410	Very toxic to aquatic life with long lasting effects.
	Restricted to professional users.
EUH208	Contains 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one. May produce an allergic reaction.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements

P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P501	Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

No other hazards known.

3.0 COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature

Suspension concentrate (=flowable concentrate)(SC) Carbendazim 500 g/l

Hazardous components

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

Name	CAS-No. / EC-No. / REACH Reg. No.	Classification	Conc. [%]
		REGULATION (EC) No 1272/2008	
Carbendazim	10605-21-7 234-232-0	Repr. 1B, H360FD Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Muta. 1B, H340	42,0
Ethanediol	107-21-1 203-473-3	Acute Tox. 4, H302 STOT RE 2, H373	>= 1,00 – < 10,00
Alkylethersulfate, sodium salt	68891-38-3 500-234-8	Eye Dam. 1, H318 Skin Irrit. 2, H315 Aquatic Chronic 3, H412	>= 1,0 – < 5,00
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	>= 0,0015 – < 0,6

Substances for which there are Community workplace exposure limits:
Ethanediol (107-21-1)

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

4.0 FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Move out of dangerous area. 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	Take off contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.
Eye contact	Protect unharmed eye. 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	Call a physician or poison control center immediately. Keep patient warm and at rest. Rinse mouth.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	Skin, eye and mucous membrane irritation
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4.3 Indication of any immediate medical attention and special treatment needed

Risks	This product is not a cholinesterase inhibitor.
Treatment	There is no specific antidote. Treat symptomatically. 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. Contraindication: atropine.

5.0 FIRE – FIGHTING MEASURES

5.1 Extinguishing media

Suitable	Water spray, Foam, Dry powder, Carbon dioxide (CO ₂)
Unsuitable	High volume water jet

5.2 Special hazards arising from the substance or mixture	In the event of fire the following may be released:., Carbon monoxide (CO), Nitrogen oxides (NO _x), Sulphur oxides
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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.

6.0 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. Ensure adequate ventilation.

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.

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). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated surface thoroughly.

Additional advice Check also for any local site procedures.

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.

7.0 HANDLING AND STORAGE

7.1 Precautions for safe handling

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

Advice on protection against fire and explosion No special precautions required.

Hygiene measures Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Remove contaminated clothing immediately and dispose of safely. Wash hands before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Store in a place accessible by authorized persons only. Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. 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.

8.0 EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Carbendazim	10605-21-7	0,6 mg/m ³ (TWA)		OES BCS*
Ethanediol	107-21-1	52 mg/m ³ /20 ppm (TWA)	12 2009	EU ELV
Ethanediol	107-21-1	104 mg/m ³ /40 ppm (STEL)	12 2009	EU ELV
Ethanediol	107-21-1	52 mg/m ³ /20 ppm (TWA)	2014	EU SCOELS
Ethanediol	107-21-1	104 mg/m ³ /40 ppm (STEL)	2014	EU SCOELS
Ethanediol (Vapor.)	107-21-1	10 ppm (TWA)		OES BCS*
Ethanediol (Aerosol.)	107-21-1	10 mg/m ³ (TWA)		OES BCS*

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

Respiratory protection is not required under anticipated circumstances of exposure.

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 6 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.	
General protective measures	Avoid contact with skin and eyes. If product is handled while not enclosed, and if contact may occur: Complete suit protecting against chemicals	

9.0 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	suspension
Colour	brown
Odour	aromatic
Flash point	> 100 °C
Density	ca. 1,20 g/cm ³ at 20 °C
Water solubility	dispersible
Partition coefficient: n-octanol/water	Carbendazim: log Pow: 1,51
Viscosity, dynamic	250 - 500 mPa.s at 20 °C Velocity gradient 20 /s 110 - 200 mPa.s at 20 °C Velocity gradient 100 /s

9.2 Other information Further safety related physical-chemical data are not known.

10.0 STABILITY AND RELIABILITY

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.

11.0 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity	LD50 (Rat) > 5.000 mg/kg
Acute dermal toxicity	LD50 (Rat) > 5.000 mg/kg
Skin irritation	Slight irritant effect - does not require labelling. (Rabbit)
Eye irritation	Slight irritant effect - does not require labelling. (Rabbit)
Sensitisation	Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Buehler test

Assessment STOT Specific target organ toxicity – single exposure

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

Assessment STOT Specific target organ toxicity – repeated exposure

Carbendazim did not cause any significant specific adverse effects or target organ toxicity in subchronic toxicity studies.

Assessment mutagenicity

Carbendazim has produced positive results in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Carbendazim was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment toxicity to reproduction

Experiments on the active substance Carbendazim have shown reproductive toxicity effects at high doses in laboratory animals.

Assessment developmental toxicity

Tests in the rat and rabbit indicate that exposure to high dose levels of Carbendazim may result in embryotoxicity.

Aspiration hazard

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

12.0 ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 0,52 mg/l Exposure time: 96 h
Toxicity to aquatic	EC50 (Daphnia magna (Water flea)) 0,26 mg/l

invertebrates Exposure time: 48 h

Toxicity to aquatic plants EC50 (Raphidocelis subcapitata (freshwater green alga)) > 100 mg/l
Exposure time: 72 h

12.2 Persistence and degradability

Biodegradability Carbendazim:
Not rapidly biodegradable

Koc Carbendazim: Koc: 200 - 246

12.3 Bioaccumulative potential

Bioaccumulation Carbendazim:
Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Carbendazim: Moderately mobile in soils

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment Carbendazim: 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 Other adverse effects

Additional ecological information No other effects to be mentioned.

13.0 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product 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.

Contaminated packaging Triple rinse containers.
Puncture container to avoid re-use.
Rinsed packaging may be acceptable for landfill, otherwise incineration will be required in accordance with local regulations.
Not completely emptied packagings should be disposed of as hazardous waste.

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

14.0 TRANSPORT INFORMATION

ADR/RID/ADN

14.1 UN number
14.2 Proper shipping name

3082
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(CARBENDAZIM SOLUTION)

14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES
Hazard no.	90
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	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CARBENDAZIM SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Marine pollutant	YES

IATA

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CARBENDAZIM SOLUTION)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES

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 73/78 and the IBC Code

No transport in bulk according to the IBC Code.

15.0 REGULATORY INFORMATION

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

Further information

WHO-classification: U (Unlikely to present acute hazard in normal use)

15.2 Chemical Safety Assessment

A chemical safety assessment is not required.

16.0 OTHER INFORMATION

The information contained herein relates only to the specified material identified. CIBA AGRIPHARMA., believes that such information is accurate and reliable as of the data of this material safety data sheet, but no representation, guarantee or warranty, expressed or implied, is made as to the accuracy, reliability, or completeness of the information. CIBA AGRIPHARMA urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application. No liability will be accepted for any injury, loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet.