



## **DEROSAL SC500 4X5L BOT UA**

Version 3 /  
102000000663

1/11  
Revision Date: 20.03.2017  
Print Date: 14.11.2017

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

#### **1.1 Product identifier**

**Trade name** DEROSAL SC500 4X5L BOT UA  
**Product code (UVP)** 05935083

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

**Use** Fungicide

#### **1.3 Details of the supplier of the safety data sheet**

**Supplier** Bayer AG  
Kaiser-Wilhelm-Allee 1  
51373 Leverkusen  
Germany

**Telefax** +49(0)2173-38-7394

**Responsible Department** Substance Classification & Registration  
+49(0)2173-38-3409 (during business hours only)  
Email: BCS-SDS@bayer.com

#### **1.4 Emergency telephone no.**

**Emergency telephone no.** Global Incident Response Hotline (24h)  
+1 (760) 476-3964 (Company 3E for Bayer AG, Crop Science Division)

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### **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.**

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



## DEROSAL SC500 4X5L BOT UA

Version 3 /  
1020000006632/11  
Revision Date: 20.03.2017  
Print Date: 14.11.2017**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.

**SECTION 3: 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. /<br>EC-No. /<br>REACH Reg. No. | Classification   | Conc. [%]            |
|--|---|--|----------------------|
|  |   | REGULATION (EC) No<br>1272/2008  |                      |
| Carbendazim  | 10605-21-7<br>234-232-0                 | Repr. 1B, H360FD<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410<br>Muta. 1B, H340 | 42,0                 |
| Ethanediol   | 107-21-1<br>203-473-3                   | Acute Tox. 4, H302<br>STOT RE 2, H373  | >= 1,00 – <<br>10,00 |
| Alkylethersulfate, sodium salt   | 68891-38-3<br>500-234-8                 | Eye Dam. 1, H318<br>Skin Irrit. 2, H315<br>Aquatic Chronic 3, H412                     | >= 1,0 – <<br>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<br>Acute Tox. 3, H311<br>Acute Tox. 3, H301<br>Skin Corr. 1B, H314  | >= 0,0015 –<br>< 0,6 |



**DEROSAL SC500 4X5L BOT UA**

Version 3 /  
102000000663

3/11  
Revision Date: 20.03.2017  
Print Date: 14.11.2017

|  |  |  |  |
|--|--|--|--|
|  |  | Skin Sens. 1, H317<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |  |
|--|--|--|--|

**Further information**

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.

**SECTION 4: FIRST AID MEASURES**

**4.1 Description of first aid measures**

|                       |  |
|-----------------------|--|
| <b>General advice</b> | Move out of dangerous area. 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>   | Take off contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.   |
| <b>Eye contact</b>    | 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. |
| <b>Ingestion</b>      | 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

**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.

**SECTION 5: FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

**Suitable** Water spray, Foam, Dry powder, Carbon dioxide (CO2)

**Unsuitable** High volume water jet



## **DEROSAL SC500 4X5L BOT UA**

Version 3 /  
102000000663

4/11  
Revision Date: 20.03.2017  
Print Date: 14.11.2017

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|  |  |
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| <b>5.2 Special hazards arising from the substance or mixture</b> | In the event of fire the following may be released:., Carbon monoxide (CO), Nitrogen oxides (NOx), Sulphur oxides          |
| <b>5.3 Advice for firefighters</b>                               |  |
| <b>Special protective equipment for firefighters</b>             | In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus. |
| <b>Further information</b>                                       | 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. 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.

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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.

**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.

**DEROSAL SC500 4X5L BOT UA**Version 3 /  
1020000006635/11  
Revision Date: 20.03.2017  
Print Date: 14.11.2017**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        |
|--------------------------|------------|---|---------|--------------|
| Carbendazim              | 10605-21-7 | 0,6 mg/m <sup>3</sup><br>(TWA)          |         | OES BCS*     |
| Ethanediol               | 107-21-1   | 52 mg/m <sup>3</sup> /20 ppm<br>(TWA)   | 12 2009 | EU ELV       |
| Ethanediol               | 107-21-1   | 104 mg/m <sup>3</sup> /40 ppm<br>(STEL) | 12 2009 | EU ELV       |
| Ethanediol               | 107-21-1   | 52 mg/m <sup>3</sup> /20 ppm<br>(TWA)   | 2014    | EU<br>SCOELS |
| Ethanediol               | 107-21-1   | 104 mg/m <sup>3</sup> /40 ppm<br>(STEL) | 2014    | EU<br>SCOELS |
| Ethanediol<br>(Vapor.)   | 107-21-1   | 10 ppm<br>(TWA)                         |         | OES BCS*     |
| Ethanediol<br>(Aerosol.) | 107-21-1   | 10 mg/m <sup>3</sup><br>(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**

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

**DEROSAL SC500 4X5L BOT UA**Version 3 /  
1020000006636/11  
Revision Date: 20.03.2017  
Print Date: 14.11.2017

|                                    |   |  |
|------------------------------------|---|--|
|                                    | Glove thickness   | > 0,4 mm                                 |
|                                    | Protective index  | Class 6                                  |
|                                    | Directive   | Protective gloves complying with EN 374. |
| <b>Eye protection</b>              | Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).   |  |
| <b>Skin and body protection</b>    | Wear standard coveralls and Category 3 Type 6 suit.<br>If there is a risk of significant exposure, consider a higher protective type suit.<br>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. |  |
| <b>General protective measures</b> | Avoid contact with skin and eyes.<br>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>                                 | brown   |
| <b>Odour</b>                                  | aromatic  |
| <b>Flash point</b>                            | > 100 °C  |
| <b>Density</b>                                | ca. 1,20 g/cm <sup>3</sup> at 20 °C   |
| <b>Water solubility</b>                       | dispersible   |
| <b>Partition coefficient: n-octanol/water</b> | Carbendazim: log Pow: 1,51  |
| <b>Viscosity, dynamic</b>                     | 250 - 500 mPa.s at 20 °C Velocity gradient 20 /s<br>110 - 200 mPa.s at 20 °C Velocity gradient 100 /s |

**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.



**DEROSAL SC500 4X5L BOT UA**

Version 3 /  
102000000663

7/11  
Revision Date: 20.03.2017  
Print Date: 14.11.2017

- 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.

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**SECTION 11: 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.

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**SECTION 12: 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



**DEROSAL SC500 4X5L BOT UA**

Version 3 /  
102000000663

8/11  
Revision Date: 20.03.2017  
Print Date: 14.11.2017

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| <b>invertebrates</b>                           | Exposure time: 48 h  |
| <b>Toxicity to aquatic plants</b>              | EC50 (Raphidocelis subcapitata (freshwater green alga)) > 100 mg/l<br>Exposure time: 72 h  |
| <b>12.2 Persistence and degradability</b>      |  |
| <b>Biodegradability</b>                        | Carbendazim:<br>Not rapidly biodegradable  |
| <b>Koc</b>                                     | Carbendazim: Koc: 200 - 246  |
| <b>12.3 Bioaccumulative potential</b>          |  |
| <b>Bioaccumulation</b>                         | Carbendazim:<br>Does not bioaccumulate.  |
| <b>12.4 Mobility in soil</b>                   |  |
| <b>Mobility in soil</b>                        | Carbendazim: Moderately mobile in soils  |
| <b>12.5 Results of PBT and vPvB assessment</b> |  |
| <b>PBT and vPvB assessment</b>                 | 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). |
| <b>12.6 Other adverse effects</b>              |  |
| <b>Additional ecological information</b>       | No other effects to be mentioned.  |

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**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>           | Triple rinse containers.<br>Puncture container to avoid re-use.<br>Rinsed packaging may be acceptable for landfill, otherwise incineration will be required in accordance with local regulations.<br>Not completely emptied packagings should be disposed of as hazardous waste. |
| <b>Waste key for the unused product</b> | <b>02 01 08*</b> agrochemical waste containing dangerous substances  |

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**SECTION 14: TRANSPORT INFORMATION**

**ADR/RID/ADN**

|                           |   |
|---------------------------|---|
| 14.1 UN number            | <b>3082</b>   |
| 14.2 Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(CARBENDAZIM SOLUTION) |





**DEROSAL SC500 4X5L BOT UA**

Version 3 /  
102000000663

9/11  
Revision Date: 20.03.2017  
Print Date: 14.11.2017

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.

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

**15.2 Chemical Safety Assessment**

A chemical safety assessment is not required.

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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.

**DEROSAL SC500 4X5L BOT UA**Version 3 /  
10200000066310/11  
Revision Date: 20.03.2017  
Print Date: 14.11.2017

|        |  |
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| 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.  |
| H340   | May cause genetic defects.   |
| H360FD | May damage fertility. May damage the unborn child.                 |
| H373   | May cause damage to organs through prolonged or repeated exposure. |
| H400   | Very toxic to aquatic life.  |
| H410   | Very toxic to aquatic life with long lasting effects.              |
| H412   | Harmful 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 %   |
| 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.

**Reason for Revision:** Safety Data Sheet according to Regulation (EU) No. 2015/830.

**SAFETY DATA SHEET** according to Regulation (EC) No. 1907/2006



**DEROSAL SC500 4X5L BOT UA**

Version 3 /  
102000000663

11/11  
Revision Date: 20.03.2017  
Print Date: 14.11.2017

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