



IMPULSE EC500

Version 2 / RP
102000007367

1/11
Revision Date: 08.08.2017
Print Date: 24.01.2022

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

1.1 Product identifier

Trade name IMPULSE EC500
Product code (UVP) 06280714

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

Company Bayer CropScience, Inc.
3/F Bayer House
Canlubang Industrial Estate
Calamba, Laguna
Philippines

Telephone +63 2 226-4888

Telefax +63 2 450-5474

1.4 Emergency telephone no.

Emergency telephone no. Bayer CropScience, Inc.
+63 2 226-4915 (24-Hour Emergency Assistance)
National Poison Management and Control Center
Tel. No. +63 2 524-1078, +63 2 567-2057
Mobile No. +63922-8961541 Fax No. +63 2 526-0062
Southern Philippines Medical Center (SPMC)
+63 2 227-2731

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

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

Acute toxicity: Category 4
H302 Harmful if swallowed.
H332 Harmful if inhaled.

Skin irritation: Category 2
H315 Causes skin irritation.

Serious eye damage: Category 1
H318 Causes serious eye damage.

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



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Specific target organ toxicity - repeated exposure: Category 2
H373 May cause damage to organs (Eyes) through prolonged or repeated exposure.

Reproductive toxicity: Category 2
H361d Suspected of damaging 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:

- Spiroxamine
- Benzyl alcohol
- Dodecylbenzenesulphonic acid, compound with 2-aminoethanol (1:1)



Signal word: Danger

Hazard statements

H302 + H332 Harmful if swallowed or if inhaled.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H361d Suspected of damaging the unborn child.
H373 May cause damage to organs (Eyes) through prolonged or repeated exposure.
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.

Precautionary statements

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor/ physician.
P501 Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

No other hazards known.

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Spiroxamine 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	
Spiroxamine	118134-30-8	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT RE 2, H373 Repr. 2, H361d Aquatic Acute 1, H400 Aquatic Chronic 1, H410	49.80
Benzyl alcohol	100-51-6	Acute Tox. 4, H332 Acute Tox. 4, H302 Eye Irrit. 2, H319	> 25
Dodecylbenzenesulphonic acid, compound with 2-aminoethanol (1:1)	26836-07-7	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 3, H412	> 5.00 – < 20
Ethoxylated polyarylphenol	99734-09-5	Aquatic Chronic 3, H412	> 1.00 – < 25.00

Further information

Spiroxamine	118134-30-8	M-Factor: 100 (acute), 100 (chronic)
Dodecylbenzenesulphonic acid, compound with 2-aminoethanol (1:1)	26836-07-7	M-Factor: 1 (acute)

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.



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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. Call a physician or poison control center immediately.
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 No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment 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. 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 cyanide (hydrocyanic acid), Carbon monoxide (CO), Nitrogen oxides (NO_x)

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.



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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.

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

No control parameters known.

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



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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) and faceshield (conforming to EN166, Field of Use = 3 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	Liquid, clear to slightly turbid
Colour	yellow to brown
Odour	aromatic
pH	9.4 at ca. 1 % (23 °C) (deionized water)
Flash point	108 °C
Ignition temperature	265 °C
Auto-ignition temperature	The product is not self-ignitable.
Density	ca. 1.00 g/cm ³ at 20 °C
Water solubility	emulsifiable
Partition coefficient: n-octanol/water	Spiroxamine: log Pow: 2.8 - 3.0 at 20 °C at pH 7
Viscosity, dynamic	82 mPa.s at 20 °C Velocity gradient 150 /s
Viscosity, kinematic	82 mm ² /s at 20 °C



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Oxidizing properties	No oxidizing properties
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) > 500 - < 1,000 mg/kg
Test conducted with a similar formulation.

Acute inhalation toxicity LC50 (Rat) 2.323 mg/l
Exposure time: 4 h
Determined in the form of a respirable aerosol.
Test conducted with a similar formulation.

Acute dermal toxicity LD50 (Rat) > 2,000 mg/kg
Test conducted with a similar formulation.

Skin irritation Irritating to skin. (Rabbit)
Test conducted with a similar formulation.

Eye irritation Severe eye irritation. (Rabbit)
Test conducted with a similar formulation.

Sensitisation Non-sensitizing. (Guinea pig)
OECD Test Guideline 406, Buehler test
Sensitising (Mouse)
OECD Test Guideline 429, local lymph node assay (LLNA)

Assessment STOT Specific target organ toxicity – single exposure

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

Assessment STOT Specific target organ toxicity – repeated exposure

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Spiroxamine caused specific target organ toxicity in experimental animal studies in dogs in the following organ(s): Eyes.

Assessment mutagenicity

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

Assessment carcinogenicity

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

Assessment toxicity to reproduction

Spiroxamine caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Spiroxamine is related to parental toxicity.

Assessment developmental toxicity

Spiroxamine caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Spiroxamine 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 (Oncorhynchus mykiss (rainbow trout)) 11.5 mg/l
Exposure time: 96 h
Test conducted with a similar formulation.

Toxicity to aquatic invertebrates EC50 (Daphnia magna (Water flea)) 10.3 mg/l
Exposure time: 48 h
Test conducted with a similar formulation.

Toxicity to aquatic plants EC50 (Desmodesmus subspicatus (green algae)) 0.029 mg/l
Growth rate; Exposure time: 72 h
Test conducted with a similar formulation.

12.2 Persistence and degradability

Biodegradability Spiroxamine:
Not rapidly biodegradable

Koc Spiroxamine: Koc: 2415

12.3 Bioaccumulative potential

Bioaccumulation Spiroxamine: Bioconcentration factor (BCF) 87
Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Spiroxamine: Slightly mobile in soils

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment Spiroxamine: 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



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Additional ecological information No other effects to be mentioned.

SECTION 13: 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.
Do not re-use empty containers.
Not completely emptied packagings should be disposed of as hazardous waste.

Waste Key In accordance with Section 2.0 - Classification of Hazardous Waste (DENR administrative order 2013-22 as amended):
J201 - Containers previously containing toxic chemical substances
M504 - Pesticides

SECTION 14: TRANSPORT INFORMATION

ADR/RID/ADN

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

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. (SPIROXAMINE, BENZYLALCOHOL 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. (SPIROXAMINE, BENZYLALCOHOL SOLUTION)



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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 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

WHO-classification: II (Moderately hazardous)

FPA Registration No. 284-385-1851

Labelling According to Fertilizer and Pesticide Authority
Pesticide Regulatory Policies and Implementing Guidelines 2nd Edition
Classification of Pesticides Based on Toxicity and Hazard

SECTION 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 3

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H361d Suspected of damaging 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 %

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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.

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