



FALCON EC460 4X5L BOT UA

Version 4 / EU
102000007462

1/11
Revision Date: 13.01.2017
Print Date: 14.11.2017

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

1.1 Product identifier

Trade name FALCON EC460 4X5L BOT UA
Product code (UVP) 05147727

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)

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
H360D May damage the unborn child.

Acute toxicity: Category 4
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H332 Harmful if inhaled.

Skin corrosion: Category 1B
H314 Causes severe skin burns and eye damage.

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.

**FALCON EC460 4X5L BOT UA**Version 4 / EU
102000007462

2/11

Revision Date: 13.01.2017

Print Date: 14.11.2017

Hazardous components which must be listed on the label:

- Spiroxamine
- Tebuconazole
- Triadimenol

**Signal word:** Danger**Hazard statements**

H302 + H312 Harmful if swallowed, in contact with skin or if inhaled.
 + H332
 H314 Causes severe skin burns and eye damage.
 H360D May damage the unborn child.
 H410 Very toxic to aquatic life with long lasting effects.
 EUH208 Contains Spiroxamine. May produce an allergic reaction.
 EUH401 To avoid risks to human health and the environment, comply with the instructions for use.
 Restricted to professional users.

Precautionary statements

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P303 + P361 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 + P353
 P305 + P351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 + P338
 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.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2 Mixtures****Chemical nature**

Emulsifiable concentrate (EC)
 Tebuconazole 167 g/l, Triadimenol 43 g/l, Spiroxamine 250 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	
Tebuconazole	107534-96-3 403-640-2	Acute Tox. 4, H302 Repr. 2, H361d Aquatic Acute 1, H400 Aquatic Chronic 1, H410	17,2

**FALCON EC460 4X5L BOT UA**Version 4 / EU
102000007462

3/11

Revision Date: 13.01.2017

Print Date: 14.11.2017

Triadimenol	55219-65-3 259-537-6	Acute Tox. 4, H302 Aquatic Chronic 3, H412	4,43
Spiroxamine	118134-30-8	Acute Tox. 4, H332 Aquatic Acute 1, H400 Acute Tox. 4, H312 Skin Sens. 1, H317 Aquatic Chronic 1, H410 Acute Tox. 4, H302 Skin Irrit. 2, H315	25,8
Dodecylbenzenesulphonic acid, compound with 2-aminoethanol (1:1)	26836-07-7 248-024-2	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 3, H412	> 1 – < 5
N-Methyl-2-pyrrolidone	872-50-4 212-828-1	STOT SE 3, H335 Skin Irrit. 2, H315 Repr. 1B, H360D Eye Irrit. 2, H319	> 1 – < 5
N,N-Dimethyl decanamide	14433-76-2 238-405-1 01-2119485027-36-XXXX	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 3, H412	> 20
Ethoxylated polyarylphenol	99734-09-5	Aquatic Chronic 3, H412	> 1 – < 25

Further information

Tebuconazole	107534-96-3	M-Factor: 1 (acute), 10 (chronic)
Spiroxamine	118134-30-8	M-Factor: 10 (acute)
Dodecylbenzenesulphonic acid, compound with 2-aminoethanol (1:1)	26836-07-7	M-Factor: 1 (acute)

Substances for which there are Community workplace exposure limits:

N-Methyl-2-pyrrolidone (872-50-4)

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. Call a physician or poison control center immediately.



FALCON EC460 4X5L BOT UA

Version 4 / EU
102000007462

4/11

Revision Date: 13.01.2017
Print Date: 14.11.2017

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 chloride (HCl), 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.

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.

**FALCON EC460 4X5L BOT UA**Version 4 / EU
102000007462

5/11

Revision Date: 13.01.2017

Print Date: 14.11.2017

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
Tebuconazole	107534-96-3	0,2 mg/m ³ (SK-ABS)		OES BCS*
Triadimenol	55219-65-3	1,6 mg/m ³ (TWA)		OES BCS*
Spiroxamine	118134-30-8	0,6 mg/m ³ (SK-SEN)		OES BCS*
N-Methyl-2-pyrrolidone	872-50-4	40 mg/m ³ /10 ppm (TWA)	12 2009	EU ELV
N-Methyl-2-pyrrolidone	872-50-4	80 mg/m ³ /20 ppm (STEL)	12 2009	EU ELV
N-Methyl-2-pyrrolidone	872-50-4	40 mg/m ³ /10 ppm (TWA)	2014	EU SCOELS
N-Methyl-2-pyrrolidone	872-50-4	80 mg/m ³ /20 ppm (STEL)	2014	EU SCOELS
N-Methyl-2-pyrrolidone	872-50-4	19 ppm (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

**FALCON EC460 4X5L BOT UA**Version 4 / EU
102000007462

6/11

Revision Date: 13.01.2017

Print Date: 14.11.2017

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

Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness of 0,4 mm). Wash when contaminated and 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.

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	light brown
Odour	aromatic
Flash point	>125 °C
Auto-ignition temperature	315 °C
Density	ca. 0,97 g/cm ³ at 20 °C
Water solubility	emulsifiable
Partition coefficient: n-octanol/water	Tebuconazole: log Pow: 3,7 Triadimenol: log Pow: 3,08 - 3,28 Spiroxamine: log Pow: 2,8 - 3,0 at 20 °C at pH 7
Oxidizing properties	No oxidizing properties
Explosivity	Not explosive

**FALCON EC460 4X5L BOT UA**Version 4 / EU
102000007462

7/11

Revision Date: 13.01.2017

Print Date: 14.11.2017

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**Acute inhalation toxicity** LC50 (Rat) 2,12 mg/l
Exposure time: 4 h
calculated**Acute dermal toxicity** LD50 (Rat) > 400 - < 4.000 mg/kg**Skin irritation** corrosive (Rabbit)**Eye irritation** Severe eye irritation. (Rabbit)**Sensitisation** Non-sensitizing. (Guinea pig)
OECD Test Guideline 406, Buehler test**Assessment STOT Specific target organ toxicity – single exposure**

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

Assessment STOT Specific target organ toxicity – repeated exposure

Tebuconazole did not cause specific target organ toxicity in experimental animal studies.

Triadimenol did not cause specific target organ toxicity in experimental animal studies.

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

Assessment mutagenicity

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

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

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

**FALCON EC460 4X5L BOT UA**Version 4 / EU
102000007462

8/11

Revision Date: 13.01.2017
Print Date: 14.11.2017**Assessment carcinogenicity**

Tebuconazole caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Liver. The mechanism of tumour formation is not considered to be relevant to man.
Triadimenol caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Liver. The increased tumour incidence is not considered to be treatment related.
Spiroxamine was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment toxicity to reproduction

Tebuconazole 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 Tebuconazole is related to parental toxicity.
Triadimenol caused reduced fertility, reduced lactation rate. The reproduction toxicity seen with Triadimenol is related to parental toxicity.
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

Tebuconazole caused developmental toxicity only at dose levels toxic to the dams. Tebuconazole caused an increased incidence of post implantation losses, an increased incidence of non-specific malformations.
Triadimenol caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Triadimenol are related to maternal 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)) 13,1 mg/l Exposure time: 96 h
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 5,4 mg/l Exposure time: 48 h
Toxicity to aquatic plants	IC50 (Desmodesmus subspicatus (green algae)) $\geq$ 0,56 mg/l Growth rate; Exposure time: 72 h

12.2 Persistence and degradability

Biodegradability	Tebuconazole: Not rapidly biodegradable Triadimenol: Not rapidly biodegradable Spiroxamine: Not rapidly biodegradable
Koc	Tebuconazole: Koc: 769 Triadimenol: Koc: 273 Spiroxamine: Koc: 2415

12.3 Bioaccumulative potential

**FALCON EC460 4X5L BOT UA**Version 4 / EU
102000007462

9/11

Revision Date: 13.01.2017

Print Date: 14.11.2017

Bioaccumulation

Tebuconazole: Bioconcentration factor (BCF) 35 - 59

Does not bioaccumulate.

Triadimenol: Bioconcentration factor (BCF) 21

Does not bioaccumulate.

Spiroxamine: Bioconcentration factor (BCF) 87

Does not bioaccumulate.

12.4 Mobility in soil**Mobility in soil**

Tebuconazole: Slightly mobile in soils

Triadimenol: Moderately mobile in soils

Spiroxamine: Slightly mobile in soils

12.5 Results of PBT and vPvB assessment**PBT and vPvB assessment**

Tebuconazole: 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).

Triadimenol: 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).

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**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

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

14.1 UN number

1760

14.2 Proper shipping name

CORROSIVE LIQUID, N.O.S.
(SPIROXAMINE, DIMETHYLCAPRAMIDE SOLUTION)

14.3 Transport hazard class(es)

8

14.4 Packing group

III

14.5 Environm. Hazardous Mark

YES

Hazard no.

80

Tunnel Code

E

**FALCON EC460 4X5L BOT UA**Version 4 / EU
102000007462**10/11**Revision Date: 13.01.2017
Print Date: 14.11.2017

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	1760
14.2 Proper shipping name	CORROSIVE LIQUID, N.O.S. (SPIROXAMINE, DIMETHYLCAPRAMIDE SOLUTION)
14.3 Transport hazard class(es)	8
14.4 Packing group	III
14.5 Marine pollutant	YES

IATA

14.1 UN number	1760
14.2 Proper shipping name	CORROSIVE LIQUID, N.O.S. (SPIROXAMINE, DIMETHYLCAPRAMIDE SOLUTION)
14.3 Transport hazard class(es)	8
14.4 Packing group	III
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****Further information**

WHO-classification: II (Moderately hazardous)

Occupational diseases

Table number(s) :

84	Health effects caused by professional use of liquid organic solvents (indicated in the table).
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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**

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.

**FALCON EC460 4X5L BOT UA**Version 4 / EU
102000007462

11/11

Revision Date: 13.01.2017
Print Date: 14.11.2017

H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H360D	May damage the unborn child.
H361d	Suspected of damaging the unborn child.
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.

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