


AGRIA S.A.  4009 Plovdiv BULGARIA	SAFETY DATA SHEET According to Annex II of Regulation (EC) № 1907/2006 and Regulation (EC) № 1272/2008 [CLP]	Issue date: 01/04/2004 Edition date: 04.02.2019
	RIVAL DUO	

1. IDENTIFICATION OF THE SUBSTANCE/ MIXTURE AND OF THE COMPANY/ UNDERTAKING

1.1. Product identifiers

Name of the substance : Propamocarb hydrochloride 400 g/l + Cymoxanil 50 g/l SC
 EC № : -
 Registration № (REACH) : -
 CAS № : -

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

Identified uses : Fungicide

1.3. Details of the supplier of the safety data sheet

Manufacture/ Supplier : AGRIA S.A.
 Street/ Zip Code : Asenovgradsko shose, 4009 Plovdiv
 Phone : 032 273 500, the phone number is available only during office hours
 Fax : + 359 32 63 83 77
 E-mail : agria@agria.bg

1.4 Emergency telephone number

Available : +44 (0)800 246 1274 (dangerous goods safety advisor)
 Language telephone line : 24/7
 : English

2. HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture

Classification According Regulation (EC) No 1272/2008 (CLP)
 : Repr. 2; H361fd
 Aquatic Chronic 2; H411

2.2. Label elements

Labeling according to Regulation (EC) No 1272/2008 (CLP)
 Hazard pictograms :



Signal words : **WARNING**

Hazard statements

- : **H361fd** – Suspected of damaging fertility. Suspected of damaging the unborn child
H411 – Toxic to aquatic life with long lasting effects

Precautionary Statements

- :
Prevention
P102 – Keep out of reach of children
P201 – Obtain special instructions before use
P273 – Avoid release to the environment

Response

- P308 + P313** – *IF* exposed or concerned: Get medical advice/ attention
P391 – Collect spillage

Disposal

- P501** – Dispose of contents/ container to accordance with national regulations

Additional Precautionary Statements

- : **EUH401** – To avoid risks to human health and the environment, comply with the instructions for use
 : Not known

2.3. Other hazards**3. COMPOSITION/ INFORMATION ON INGREDIENTS****3.1. Substances**

- : Refers to mixture

3.2. Mixtures

Description of the mixture

Name	CAS №	EC №	Index №	REACH Reg. №	Concentration (% w/v)	Classification according Regulation (EC) № 1272/2008 (CLP)
<i>Propamocarb Hydrochloride (ISO); Propyl – 3-(dimethylamino)-propyl carbamate monohydrochloride</i>	25606-41-1	247-125-9	-	-	40 ± 2.0	Skin Sens. 1; H317
<i>Cymoxanil; 2-cyano-N-[(ethylamino)carbonyl]-2-(methoxyimino)acetamide</i>	57966-95-7	261-043-0	616-035-00-5	-	5 ± 0.5	Acute Tox. 4; H302 Skin Sens. 1; H317 Repr. 2; H361fd STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic 1; H410
<i>Soprophor FL</i>	99734-09-5	-	-	-	3	Aquatic Chronic 3; H412

For full text of Hazard categories and Hazard statements: see SECTION 16 (v).

4. FIRST AID MEASURES**4.1. Description of first aid measures**

Following inhalation

- : Immediately move to fresh air and rest. Seek medical advice immediately if breathing is difficult.

Following skin contact

- : In case of contact, immediately wash affected area with soap and water. Seek medical advice if necessary. Wash contaminated clothing before reuse.

- | | | |
|-------------------------------------|---|--|
| Following eye contact | : | Hold eyes open and rinse with large quantity of water for at least 15 minutes. Seek medical advice if irritation persists. |
| Following ingestion | : | Call a poison control center or doctor immediately for treatment advice. Do not induce vomiting. |
| Self-protection of the first-aiders | : | Use PPE |

4.2. Most important symptoms and effects, both acute and delayed

: Not known

4.3. Indication of any immediate medical attention and special treatment needed

: Treat symptomatically

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

- | | | |
|--------------------------------|---|--|
| Suitable extinguishing media | : | Soft stream water fog, foam, carbon dioxide, dry chemical. |
| Unsuitable extinguishing media | : | Water jet |

5.2. Special hazards arising from the substance or mixture

- | | | |
|-------------------------------|---|--|
| Hazardous combustion products | : | If involved in a fire, may evolve oxides of nitrogen, HCl, carbon dioxide and carbon monoxide. Do not breathe fumes. |
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5.3. Advice for firefighters

: Full protective clothing and self contained breathing apparatus

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

For those staff which does not meet for emergency

: Keep unnecessary personnel away.

For the persons responsible for emergency

: Eliminate all ignition sources (flame or spark). Provide local and general exhaust ventilation. Use protective clothing and gloves, respiratory mask with an effective particulate filter, chemical goggles for eye protection.

6.2. Environmental precautions

: In case of accidental release take precautions to protect the surface and underground water, soil and sewage from contamination. Remove the sources of heat and flames.

In case of spill into the sewage, surface water, ground water or soil notify the competent authorities immediately.

6.3. Methods and material for containment and cleaning up

For containment and cleaning

: Absorb with an inert material – sand, zeolite. Use vacuum cleaning. Do not dispose the product and/ or contaminated materials into the sewage systems, water sources or water bodies. Collect into an appropriate, labelled tightly sealed waste container. Store the container at an appropriate place for further treatment or disposal according to the national legislation.

Other information

: Not available

6.4. Reference to other sections

: The collected product and/ or contaminated materials should be treated as a waste according to section 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautionary measures	: Use process enclosures, local exhaust ventilation and other suitable engineering controls to keep airborne levels below recommended exposure limits.
Measures to prevent fire	: If user operations generate aerosol, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. (See section 8).
Measures to prevent aerosol and dust	: Regularly clean the premises and facilities wearing personal protective equipment and using professional fire-safe cleaning tools. Keep within the workspace only the quantities necessary for the normal working process. Containers/ packaging must not be left open. Keep away from sources of ignition (open flames, sparkles).
Measures for environmental protection	: No available information
Advice on general occupational hygiene	: Do not eat, drink or smoke when handling the product. In case of contamination change the work clothing. Avoid inhalation, ingestion and contact with eyes and skin. Do not handle this product without wearing the recommended personal protective clothing and equipment. Gloves and coveralls are worn during mixing/loading and the application.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions	: Keep in cool, dry, well-ventilated place far from sources of ignition. Prevent static electricity generation. Keep out of reach of children.
Packing materials	: Keep in unopened original packing.
Requirements for storage rooms and vessels	: Keep away from: <ul style="list-style-type: none">- medicinal products, food, forage, fertilizers and seed- hazardous infectious substances, radioactive substances, explosive substances- highly reactive oxidizing substances
Class of storage	: Not available
Additional information on storage conditions	: Not available

7.3. Specific end use(s)

Recommendations	: See point 7.1, 7.2 and the label/ leaflet for relevant uses of this product.
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8. EXPOSURE CONTROL/ PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limit values in air according to national (Bulgarian) legislation

Name	CAS №/ EC №	Occupational exposure limit values in air for the chemical substances	Legal basis
Propamocarb Hydrochloride (ISO); Propyl – 3-(dimethylamino)-propyl carbamate monohydrochloride	25606-41-1/ 247-125-9	8 h – 1.0 mg/m ³	Ordinance No. 13 on the protection of workers from risks related to exposure to chemical agents at work (Government Gazette, No. 8/2004 amended No.2/2012)
Cymoxanil, 2-cyano-N-[(ethylamino) carbonyl]-2-(methoxyimino) acetamide	57966-95-7/ 261-043-0	8 h – 2.0 mg/m ³	

Occupational exposure limit values in air according to EU legislation

None established

Consult the relevant national limit values currently applicable in the EU Member State/ Non-EU country in which this safety data sheet is being provided.

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Structural, organizational and technical measures : Ensure adequate local and overall ventilation in the workplace. ENGINEERING CONTROL OF OPERATOR EXPOSURE MAY REPLACE PERSONAL PROTECTIVE EQUIPMENT if this provides higher standard of operator protection.

8.2.2. Individual protection measures, such as personal protective equipment

Respiratory protection

: In case of mist or aerosol formation use respirator with an approved filter. Half mask with a particle filter FFP2 (EN149).



Skin protection

: **In case of prolonged and repeated exposure**
Wear body-covering chemical resistant protective clothing.



Eye protection

: Use safety glasses with side shields (according to EN 166).



Hand protection

: **In case of short term exposure:**
Single-use vinyl gloves.
In case of prolonged or frequently repeated exposure
Use of nitrile-rubber gloves for multiple use with accordance with EN 374. Thickness > 0.4 mm. If wearing up change the gloves.



Thermal hazards

: No available information

8.2.3. Environmental exposure controls

: Emissions from the ventilation system and working equipment should be checked for conformity with environment safety legislations.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

(a) *Appearance* : Cream/ beige, free – flowing liquid

Method: Observation of color, physical state, odour

Reference: Own GLP study – “Physical State, Appearance and Color”

(b) *Odor* : “Sweet” odor

Method: Observation of color, physical state, odour

Reference: Own GLP study – “Physical State, Appearance and Color”

(c) *Odor threshold* : Not available

(d) *pH* : 2.8 – 3.5 (1% solution)

Method: CIPAC MT 75

Reference: Own GLP study – “pH determination”

(e) *Melting point/ Freezing point* : No available information

(f) *Initial boiling point and boiling range* : The sample boiled between 103 and 104°C

(g) *Flash point* : The sample boiled between 103 and 104°C and extinguished the flame – No Flash Point observed

Method: EEC A9

Reference: Own GLP study – “Flash point”

(h) *Evaporation rate* : Not available

(i) *Flammability (solid, gas)* : Not applicable

(j) *Upper lower flammability or explosive limits* : Not available

(k) *Vapor pressure* : No available information

(l) *Vapor density* : No available information

(m) *Density* : 1.095 ± 0.05 g/cm³

Method: CIPAC MT 3.2

Reference: Own GLP study – “Determination of relative density”

(n) *Solubility(ies)* : No available information

(o) *Partition coefficient: n-octanol/water* : No available information

(p) *Auto – ignition temperature* : No flash observed below 400 °C

Method: EEC A15

Reference: Own GLP study – “Auto – ignition temperature”

(q) *Decomposition temperature* : 150 °C (propamocarb hydrochloride)

(r) *Viscosity* : Average at 20 °C = 1336.32 m/Pas;
Average at 40 °C = 645.75 m/Pas

Method: OECD 114

Reference: Own GLP study – “Determination of Viscosity”

(s) *Explosive properties* : No evidence of explosion risk

Method: EEC A14

Reference: Own GLP study – “Explosive properties”

(t) *Oxidizing properties* : No evidence of oxidation risk

Method: EEC A17

Reference: Own GLP study – “Oxidizing properties”

9.2. Other information

Corrosion : No available information

10. STABILITY AND REACTIVITY

10.1. <u>Reactivity</u>	: No hazardous reactions when stored and handled according to instructions.
10.2. <u>Chemical stability</u>	: When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture.
10.3. <u>Possibility of hazardous reactions</u>	: Not known
10.4. <u>Conditions to avoid</u>	: Avoid storage at temperature > 35 °C in a confined place. Slow decomposition in presence of heat. Prevent heating of the material to avoid thermal decomposition.
10.5. <u>Incompatible materials</u>	: Avoid contact with strong oxidants and strong bases. Decomposes under alkaline and acidic conditions.
10.6. <u>Hazardous decomposition products</u>	: None when stored and handled according to instructions. See section 5.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity effects based on own studies – Data on formulated product

Acute oral toxicity in rats:

LD₅₀ = 5000 mg/kg bw (Rattus norvegicus)

Method: OECD 423

Reference: Own GLP study "Acute oral toxicity"

Acute dermal toxicity in rats:

LD₅₀ > 2000 mg/kg bw (Rattus norvegicus)

Method: OECD 402

Reference: Own GLP study "Acute dermal toxicity"

Inhalation toxicity in rats:

LC₅₀ > 5.184 mg/L air (Rattus norvegicus)

Method: OECD 403

Reference: Own GLP study "Acute inhalation toxicity"

Skin corrosion/ irritation: Not classified as skin irritant – erythema (0.33) & odema (0.00) in rabbits

Method: OECD 404

Reference: Own GLP study "Acute Dermal Irritation/Corrosion"

Serious eye damage/ irritation: Not classified as an eye irritant

Method: OECD 405

Reference: Own GLP study "Acute Eye Irritation/Corrosion"

Respiratory or skin sensitization: Not considered as positive

Method: OECD 406

Reference: Own GLP study "Skin sensitization"

Germ cell mutagenicity	: Not mutagenic activity
Carcinogenicity	: Not classified as carcinogenic
Reproductive toxicity	: Classified as toxic for reproduction, category 2
STOT – single exposure	: No available information
STOT – repeated exposure	: No available information
Aspiration hazards	: Not known

12. ECOLOGICAL INFORMATION

12.1. Toxicity effects based on own studies:

Data on formulated product

Waterflea (*Daphnia magna*): EC₅₀ > 100 mg/L

Method: OECD 202

Reference: Own GLP study "Acute immobilisation study in *Daphnia magna*"

Algae (*Pseudokirchneriella subcapitata*): NOEC = 3.13 mg/L

LOEC = 6.25 mg/L

EC₅₀ = 11.31 mg/L

growth inhibition E_BC₅₀ = 39.78 mg/L

growth reduction E_rC₅₀ = 39.78 mg/L

Method: OECD 201

Reference: Own GLP study "Alga growth inhibition test"

Birds: LD₅₀ > 2000 mg/kg (*Japanese quail*)

Method: OECD 223

Reference: Own GLP study "Acute oral toxicity study of Japanese quail"

Fish (*Rainbow trout*): 96h LC₅₀ > 100 mg a.i./L

Method: OECD 203

Reference: Own GLP study "Acute oral toxicity study of Rainbow trout"

Honeybees, oral: The median oral lethal dose meets the specified range, LD₅₀ > 241.1 µg/bee (or 100 µg a.i./bee)

Method: OECD 213

Reference: Own GLP study "Acute toxicity study in honey bees"

Honeybees, contact: The median contact lethal dose meets the specified range, LD₅₀ > 241.1 µg/bee (or 100 µg a.i./bee)

Method: OECD 214

Reference: Own GLP study "Acute toxicity study in honey bees"

Earthworms (*Eisenia foetida*): NOEC = 5000 mg/kg artificial soil;

Acute toxicity, 14day LC₅₀ > 5000 mg/kg artificial soil

Method: OECD 207

Reference: Own GLP study "Acute toxicity study in earthworms"

12.2. Persistence and degradability

: Propamocarb hydrochloride does not persist in soil and is rapidly mineralized.

DT₅₀ – 10 – 27 days

– soil – easily degradable, DT₅₀ soil – 3.5 (for cymoxanil)

12.3. Bioaccumulative potential

: Low

12.4. Mobility in soil

: Low mobility in soil (for propamocarb hydrochloride)

- Decomposition in soil is caused by reactions of hydrolysis. (for cymoxanil)

12.5. Results of PBT and vPvB assessment

: The product does not contain any PBT or vPvB substances

12.6. Other adverse effects

: Not known

12.7. Additional information

: No additional information

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

: **Disposal must be carried out** in accordance with the provisions of the national legislation, in an environmentally safe manner.

Recommended treatment method: burning in appropriately licensed incinerators.

Collection of small product quantities:

Store in solid waste containers.

The container should be clearly labelled, with content description, danger indication symbols, H- and P-statements. Store in well ventilated areas, until deposit to a licensed waste disposal company. The water used for contaminated surface washing should be collected for further treatment.

Do not reuse the empty containers for any other purpose.

Washing products

: Do not dispose into the sewage. Do not pollute natural water sources. Remove washing waters by sprinkle treating part.

Waste code

: 07 04 13* solid waste, containing dangerous substances
07 04 01* aqueous washing liquid and mother liquors

Waste code, packaging

: 15 01 10* packaging containing residues of or contaminated by dangerous substances

14. TRANSPORT INFORMATION

14.1. General information

UN-No. (ADR)

: 3082

UN proper shipping name

: Environmentally hazardous substance, liquid, n.o.s (contains propamocarb hydrochloride, cymoxanil)

Transport hazard class(es)

: 9

Packing group

: III

Environmental hazards

: **Environmentally hazardous substance indication**

ADR/RID/ IMDG-Code/ICAO-TI /IATA-DGR: **x yes** / ☐ no

Marine pollutant: **x yes** / ☐ no

Marking

:



Special precautions for user

: See Sections 6 – 8

15. REGULATORY INFORMATION

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

EU Legislations:

EC Regulation 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products and repealing Directives 79/117/EEC and 91/414/EEC
Applicable

REGULATION (EC) No 1272/2008 of the European parliament and of the Council of 16 December 2008 on classification, labelling and packing of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Applicable

REGULATION (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemical Agency, amending Directive 1999/45/EC and repealing Council regulation (EEC) No 793/93 and Commission regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

No restrictions

DIRECTIVE 2012/18/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC

This product is classified under the Seveso III Directive

Seveso III Directive

E2: Hazardous to the aquatic environment – Chronic 2
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National Legislation:

Ordinance on prevention of major accidents involving hazardous substances and limiting their consequences.

Applicable

Ordinance for authorization of plant protection products.

Applicable

Ordinance on procedures for labelling of plant protection products.

Applicable

15.2. Chemical safety assessment

: The chemical safety assessment has been carried out for the mixture.

16. OTHER INFORMATION

(i) Indication of changes

The information in this safety data sheet was changed in the following sections:

2 – Hazard Identification

3 – Composition/ Information of ingredients

15 – Regulatory information

(ii) Abbreviation and acronyms

None

(iii) Key literature references and sources for data

ECHA Guidance on the compilation of safety data sheets (*version 3.1, November 2015*)

(iv) Classification and procedure used to derive the classification for mixtures to Regulation (EC) 1272/2008 [CLP]

Classification according to Regulation (EC) № 1272/2008	Classification procedure
<i>Repr. 2; H361fd</i>	On basis of calculation method
<i>Aquatic Chronic 2; H411</i>	On basis of calculation method

(v) Relevant H – statements (number and full text as referred to SECTION 3)

According Regulation (EC) №1272/2008

Acute Tox. 4 – Acute toxicity, categories of danger 4; **H302** Harmful if swallowed

Skin Sens. 1 – Skin sensitisation, category of danger 1; **H317** May cause an allergic skin reaction

Repr. 2 – Toxic for reproduction, categories of danger 2; **H361fd** Suspected of damaging fertility. Suspected of damaging unborn child

STOT RE 2 – Specific target organ toxicity – repeated exposure, categories of danger 2; **H373** May cause damage to organs (blood, thymus) through prolonged or repeated exposure

Aquatic Acute 1 – Hazardous to the aquatic environment – acute, categories of danger 1; **H400** Very toxic to aquatic life

Aquatic Chronic 1 – Hazardous to the aquatic environment – chronic, categories of danger 1; **H410** Very toxic to aquatic life with long lasting effects

Aquatic Chronic 3 – Hazardous to the aquatic environment – chronic, categories of danger 3; **H412** Harmful to aquatic life with long lasting effects

(vi) Training advice

General occupational hygiene training recommended

(vii) Further information

THE INFORMATION PRESENTED IN THIS SAFETY DATA SHEET IS BASED ON OUR KNOWLEDGE OF THE PRODUCT AT THE DATE OF ISSUE AND IS INTENDED TO PROVIDE ONLY GENERAL HEALTH AND SAFETY GUIDANCE.

THIS SAFETY DATA SHEET COMPLEMENTS THE TECHNICAL SPECIFICATION/ LABEL/ LEAFLET OF THE PRODUCT BUT DOES NOT REPLACE THEM.

THE USERS OF THIS PRODUCT SHOULD MAKE THEIR OWN ASSESSMENT OF ITS SUITABILITY FOR THE INTENDED PURPOSES PRIOR TO USE.

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 OR OTHER AVAILABLE TECHNICAL USAGE LITERATURE.