ROTTERDAM CONVENTION

SECRETARIAT FOR THE ROTTERDAM CONVENTION
ON THE PRIOR INFORMED CONSENT PROCEDURE
FOR CERTAIN HAZARDOUS CHEMICALS AND PESTICIDES
IN INTERNATIONAL TRADE

UNEP

FORM FOR NOTIFICATION
OF FINAL REGULATORY ACTION TO BAN OR SEVERELY RESTRICT A CHEMICAL

Country:

European Union

(Member States are: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and United Kingdom)

SECTION 1 IDENTITY OF CHEMICAL SUBJECT TO THE FINAL REGULATORY ACTION

1.1	**Common name**	**Procymidone**
1.2	**Chemical name according to an internationally recognized nomenclature (e.g. IUPAC), where such nomenclature exists**	**N-(3,5-dichlorophenyl)-1,2-dimethylcyclopropane-1,2-dicarboximide**
1.3	**Trade names and names of preparations**	Sumilex 50 WP Sumisclex 50 WP

1.4 Code numbers

1.4.1	CAS number	32809-16-8
1.4.2	Harmonized System customs code	2925.19
1.4.3	Other numbers (specify the numbering system)	EINECS: 251-233-1 CIPAC No: 383 Combined Nomenclature (CN) code of the European Union: 2925 19 95

1.5 Indication regarding previous notification on this chemical, if any

1.5.1 ☒ This is a first time notification of final regulatory action on this chemical.

1.5.2 ☐ This notification replaces all previously submitted notifications on this chemical.
Date of issue of the previous notification: _____

SECTION 2 FINAL REGULATORY ACTION

2.1 The chemical is: ☐ **banned** **OR** ☒ **severely restricted**

2.2 Information specific to the final regulatory action

2.2.1 Summary of the final regulatory action

Commission Directive 2006/132/EC of 11 December 2006 amending Directive 91/414/EEC severely restricted the placing on the market and use of plant protection products containing procymidone.

The Commission Directive amended Annex I to Directive 91/414/EEC (which was replaced by Regulation (EC) No 1107/2009 concerning the placing of plant protection products on the market) to permit the use of procymidone from 1 January 2007 to 30 June 2008. It also set in place restrictions on the use of procymidone (see for more details Section 2.3.3). The Directive imposed on the Member States a requirement to review all authorisations of procymidone to ensure that the restrictions set in Directive 2006/132/EC were respected as of 30 June 2007. It also required a re-evaluation of all authorised plant protection products containing procymidone by 30 June 2008.

The restrictions limited the application of procymidone to specific crops and defined maximum application rates. It also limited the period of procymidone's inclusion in Annex I to Directive 91/414/EEC to 18 months after entry into force of Directive 2006/132/EC on 1 January 2007.

It should be noted that this period has now expired. As of 30 June 2008, procymidone is no longer included in the list of authorised active substances in Annex I. Hence, procymidone is no longer allowed to be used as plant protection product in the European Union.

2.2.2 Reference to the regulatory document, e.g. where decision is recorded or published

Commission Directive 2006/132/EC of 11 December 2006 amending Council Directive 91/414/EEC to include procymidone as active substance (Official Journal of the European Union, L349 of 12.12.2006, p.22-p.26.)

http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l_349/l_34920061212en00220026.pdf

2.2.3 Date of entry into force of the final regulatory action

The Directive entered into force on 1 January 2007. However, Member States had to apply the provisions of this Directive as of 1 July 2007.

2.3 Category or categories where the final regulatory action has been taken

2.3.1 All use or uses of the chemical in your country prior to the final regulatory action

Procymidone was used on the following crops: tree nuts (almond, hazel, etc.), pome fruit (pear, etc.), stone fruits (apricot, cherry, peach, plum, etc.), berries and small fruits (grape, vine, strawberry, raspberry,etc.), miscellaneous fruits (kiwi, etc.), bulb vegetables (garlic, onion, shallot etc.), fruiting vegetables (tomato, pepper, eggplant, cucumber, gherkin, courgette, melon, etc.), brassica vegetables (cabbage etc.), leaf vegetables (lettuce, endive, chicory, witloof, leaf beet, etc.), legume vegetables (bean, pea, etc.), stem vegetables (asparagus, etc.), pulses (lentils, etc.), oil seeds (rape, sunflower, etc.), tobacco, ornamentals.

Although most uses involved foliar application, procymidone is absorbed through the roots and transported to leaves and flowers. Species controlled include: *Botrytis sp., Monilia sp., Sclerotinia sp., Fusarium sp., Rhizoctonia sp., Stemphylium sp., Curvularia sp., Stromatinia sp.*

2.3.2 Final regulatory action has been taken for the category ☐ Industrial

Use or uses prohibited by the final regulatory action

Not relevant

Use or uses that remain allowed (only in case of a severe restriction)

Not relevant

2.3.3 Final regulatory action has been taken for the category ☒ Pesticide

Formulation(s) and use or uses prohibited by the final regulatory action

Part A of the Annex to Commission Directive 2006/132/EC provided for two crops (cucumber in greenhouses (closed hydroponic systems) and plums (for processing)) on which the use of procymidone was in principle allowed and a

maximum rate of 0,75g active substance per hectare per application. This means that Member States were allowed to grant national authorisations within those limits. All other uses not included in that list, i.e. other crops and higher rates of the active substance, were prohibited.

In addition, the following uses were not allowed to be authorised by Member States:
— air application,
— knapsack and hand-held applications neither by amateur nor by professional users,
— home gardening

Formulation(s) and use or uses that remain allowed
(only in case of a severe restriction)

Only uses as fungicide on the following crops could be authorised:
— cucumbers in greenhouses (closed hydroponic systems),
— plums (for processing),
at rates not exceeding 0.75 g a.s per hectare per application.

Member States had to ensure that all appropriate risk mitigation measures were applied. Particular attention had to be paid to the protection of:
— aquatic organisms. Where relevant, an appropriate distance had to be kept between treated areas and surface water bodies;
— birds and mammals. Conditions of authorisation had to include risk mitigation measures;
— consumers. The acute dietary exposure of which needed to be controlled,
— groundwater, if the active substance were to be applied in regions with vulnerable soil and/or climatic conditions. Conditions of authorisation had to include risk mitigation measures;
— operators, who had to wear suitable protective clothing, in particular gloves, coveralls, rubber boots and face protection or safety glasses during mixing, loading, application and cleaning of equipment, unless the exposure to the substance was adequately precluded by the design and construction of the equipment itself or by the mounting of specific protective components on such equipment;
— workers, who needed to wear suitable protective clothing, in particular gloves, if they had to enter a treated area before the specific re-entry period had expired.

2.4 Was the final regulatory action based on a risk or hazard evaluation? ☒ **Yes**

☐ **No** (If no, you may also complete section 2.5.3.3)

2.4.1 If yes, reference to the relevant documentation, which describes the hazard or risk evaluation

A risk and hazard assessment was carried out on the basis of Directive 91/414/EEC (replaced by Regulation (EC) No 1107/2009), which provides for the European Commission to issue a work programme for the examination of existing active substances used in plant protection products with a view to their possible inclusion in Annex I to the Directive, and in accordance with the provisions laid down in Regulation (EEC) No 3600/92.

A Member State was designated to undertake the risk assessment based on the information submitted by the applicant and to establish a draft assessment report (monograph), which was subject to peer review by the Member States and the European Commission.

The European Commission examined procymidone in accordance with the provisions laid down in Regulation (EEC) No 3600/92 and established a draft review report which was submitted to peer review by the Standing Committee on the Food Chain and Animal Health (SCFCAH), which concluded that it may be expected that plant protection products containing procymidone would fulfil the safety requirements laid down in Article 5(1)(a) and (b) of Directive 91/414/EEC. This conclusion was however subject to compliance with the particular requirements in sections 4, 5, 6 and 7 of the review report, as well as to the implementation of the provisions of Article 4(1) and the uniform principles laid down in Annex VI of Directive 91/414/EEC, for each procymidone containing plant protection product for which Member States would grant or review the authorisation.

The evaluation was based on a review of scientific data taking into account the conditions prevailing in the European Union (intended uses, recommended application rates, good agricultural practices). Only data that was generated according to scientifically recognised methods were validated and used for the evaluation. Moreover, data reviews were performed and documented according to generally recognised scientific principles and procedures.

The risk assessment described above resulted in several documents, including:

- European Commission (2007): Review report for the active substance procymidone finalised in the Standing Committee on the Food Chain and Animal Health at its meeting on 3 March 2006 in view of the inclusion of procymidone in Annex I of Directive 91/414/EEC (SANCO/4064/2001 final, 5 January 2007)

http://ec.europa.eu/food/plant/protection/evaluation/existactive/list_procymidone.pdf

- France (2000): Monograph Procymidone - Volume 1 – Report and Proposed Decision (including the relevant addenda).

2.4.2 Summary description of the risk or hazard evaluation upon which the ban or severe restriction was based.

2.4.2.1 Is the reason for the final regulatory action relevant to human health? ☒ Yes ☐ No

If yes, give summary of the hazard or risk evaluation related to human health, including the health of consumers and workers

It was concluded that it could be expected that plant protection products containing procymidone would fulfil the safety requirements laid down in Article 5(1)(a) and (b) of Directive 91/414/EEC. This conclusion was however subject to compliance with the particular requirements in sections 4, 5, 6 and 7 of the review report, as well as to the implementation of the provisions of Article 4(1) and the uniform principles laid down in Annex VI of Directive 91/414/EEC, for each procymidone containing plant protection product for which Member States would grant or review the authorisation.

Therefore, Member States had to ensure that all appropriate risk mitigation measures were applied. Member States were also requested to pay particular attention to the protection of

- consumers, the acute dietary exposure of which needed to be controlled;
- operators, who had to wear suitable protective clothing, in particular gloves, coveralls, rubber boots and face protection or safety glasses during mixing, loading, application and cleaning of equipment, unless the exposure to the substance was adequately precluded by the design and construction of the equipment itself or by the mounting of specific protective components on such equipment;
- workers, who needed to wear suitable protective clothing, in particular gloves, if they had to enter a treated area before the specific re-entry period had expired.

Member States were requested to ensure that the authorisation holders report at the latest on 31 December of each year on incidences of operator health problems. Member States could require that elements, such as sales data and a survey of use patterns, were provided so that a realistic picture of the use conditions and the possible toxicological impact of procymidone could be obtained.

In addition, Member States had to request the submission of further studies to address the potential endocrine disrupting properties of procymidone within two years after the adoption of the Test Guidelines on endocrine disruption by the Organisation for Economic Cooperation and Development (OECD). They had to ensure that the notifier at whose request procymidone had been included in this Annex provide such studies to the Commission within two years of the adoption of the above test guidelines.

Expected effect of the final regulatory action

Reduction of risk from the use of plant protection products containing procymidone.

2.4.2.2 Is the reason for the final regulatory action relevant to the environment? ☒ Yes ☐ No

If yes, give summary of the hazard or risk evaluation related to the environment

It was concluded that it could be expected that plant protection products containing procymidone would fulfil the safety requirements laid down in Article 5(1)(a) and (b) of Directive 91/414/EEC. This conclusion was however subject to compliance with the particular requirements in sections 4, 5, 6 and 7 of the review report, as well as to the implementation of the provisions of Article 4(1) and the uniform principles laid down in Annex VI of Directive 91/414/EEC, for each procymidone containing plant protection product for which Member States would grant or review the authorisation.

Therefore, Member States had to ensure that all appropriate risk mitigation measures are applied. Member States were requested to pay particular attention to the protection of:

— aquatic organisms. Where relevant, an appropriate distance had to be kept between treated areas and surface water bodies. This distance could depend on the application or not of drift reducing techniques or devices;
— birds and mammals. Conditions of authorisation needed to include risk mitigation measures, such as a judicious timing of the application and the selection of those formulations which, as a result of their physical presentation or the presence of agents that ensure an adequate avoidance, minimise the exposure of the concerned species;
— groundwater, if the active substance were to be applied in regions with vulnerable soil and/or climatic conditions. Conditions of authorisation had to include risk mitigation measures.

Expected effect of the final regulatory action

Reduction of risk from the use of plant protection products containing procymidone.

2.5 Other relevant information regarding the final regulatory action

2.5.1 Estimated quantity of the chemical produced, imported, exported and used

	Quantity per year (MT)	Year
produced	No information	
imported	No information	
exported	No information	
used	No information	

2.5.2 Indication, to the extent possible, of the likely relevance of the final regulatory action to other states and regions

Similar health and environmental problems are likely to be encountered in other countries where the substance is used, particularly in developing countries.

2.5.3 Other relevant information that may cover:

2.5.3.1 Assessment of socio-economic effects of the final regulatory action

No information

2.5.3.2 Information on alternatives and their relative risks, e.g. IPM, chemical and non-chemical alternatives

No information

2.5.3.3 Basis for the final regulatory action if other than hazard or risk evaluation

No information

2.5.3.4 Additional information related to the chemical or the final regulatory action, if any

No information

SECTION 3 PROPERTIES

3.1 Information on hazard classification where the chemical is subject to classification requirements

International classification systems **e.g. WHO, IARC, etc.**	**Hazard class**
WHO	Acute Hazard U, unlikely to be hazardous
IARC	Not listed

Other classification systems **e.g. EU, USEPA**	**Hazard class**
US EPA	B2, Probable human carcinogen

3.2 Further information on the properties of the chemical

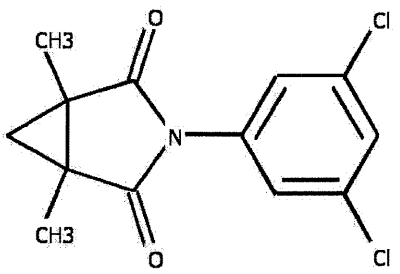
3.2.1 Description of physico-chemical properties of the chemical

Minimum Purity: 985 g/kg

Molecular formula: $C_{13}H_{11}Cl_2NO_2$

Molecular Mass: 284.1

Structural Formula:



Appearance: white granular powder with a musty odour

Melting Point: 164-165°C

Boiling Point: Not required

Vapour Pressure: 2.3 x 10^{-5} Pa at 25°C

Henry's Law Constant: 2.65 x 10^{-3} Pa m3 mol-1 at 20-25°C

Solubility in Water: 2.46 mg/l at 20°C, 3.07 mg/l at 25 °C

Solubility in Organic Solvents:

Acetone: 180 g/l at 25°C

Toluene: 66 g/l

Benzene: 86 g/l

Methanol: 16 g/l

Ethyl acetate: 115 g/l

Cyclohexanone: 148 g/l

Isopropanol: 5 g/l

Ethylene glycol: 0.5 g/l

Chloroform: 216 g/l

Acetonitrile: 101 g/l

Relative Density: 1.43 at 22°C

Dissociation Constant (pKa): No pKa value from pH 2-12 at 20°C

Log Pow: 3.30 at 25°C, pH6

Hydrolysis Stability:

pH9, DT_{50}: 28 min at 30°C

pH7, DT_{50}: 3.8 days at 30°C

pH5, DT_{50}: 62 days

Photostability in water DT_{50} approximately 8 days under sunlight.

Reference

European Commission (2007): Review report for the active substance procymidone finalised in the Standing Committee on the Food Chain and Animal Health at its meeting on 3 March 2006 in view of the inclusion of procymidone in Annex I of Directive 91/414/EEC (SANCO/4064/2001 final, 5 January 2007)

http://ec.europa.eu/food/plant/protection/evaluation/existactive/list_procymidone.pdf

3.2.2 Description of toxicological properties of the chemical

Toxicokinetics

Acute toxicity

Rat LD_{50} oral: >5000 mg/kg bw

Rat LD_{50} dermal: >5000 mg/kg bw

Rat LC_{50} inhalation: >1.5 mg/l

Skin irritation: not irritant

Eye irritation: not irritant

Skin sensitisation : not sensitising (M&K test)

Short term toxicity

Target/critical effect: hepatotoxicity (rat and mouse), testicular atrophy (mouse).

Lowest relevant oral NOEL: 26-week rats study NOEL 150 ppm (7.5 mg/kg bw/day based on findings in the first three months.

Lowest relevant dermal NOEL: 28 day rat study NOEL 1000 mg/kg bw/day.

Lowest relevant inhalation NOAEL/NOEL: No data (not required).

Genotoxicity

No genotoxic potential

Long term toxicity and carcinogenicity

Target/critical effect: Liver – hepatotoxicity in rats and mice,

Testes – testicular interstitial cell hyperplasia in rats.

Lowest relevant NOAEL: 2-year rat study NOAEL = 100 ppm (4.6 mg/kg bw/day).

Carcinogenicity: Liver – hepatoblastoma in mice. Bibliographic data provided indicate that the incidence in this study seems to be in the bibliographic range.

Testes – testicular interstitial cell tumours in rats.

Reproductive toxicity

Target/critical effect – Reproduction:

2-generation rat study, parents – increased liver and testes weight; Offspring – hypospadia, reduced anogenital distance, increased testicular weight, decreased prostate weight.

Lowest relevant reproductive NOAEL: 2-generation rat study NOAEL = 50 ppm (2.5 mg/kg bw/day)

Target/critical effect – Developmental toxicity

Rat – Reduced anogenital distance, hypospadia, testicular atrophy, undescended testes.

Lowest relevant developmental NOAEL: rat developmental study NOAEL = 3.5 mg/kg bw/day

Neurotoxicity/delayed neurotoxicity: not required

Other studies: Mechanistic studies indicate antiandrogenic activity and hypersecretion of testosterone in the rat. Procymidone inhibits androgen from binding to rodent and human receptor.

Studies on metabolites indicate that 3,5-dichloroaniline, a minor metabolite in the rat has:

Rat LD_{50} oral: 820 mg/kg bw

Rat LD_{50} dermal: 1250 mg/kg bw

Medical data

No adverse reports (up to 2001)

ADI: 0,025 mg/kg bw/day based on the rat 2-generation study with a Safety Factor of 100.

AOEL systemic: 0.035 mg/kg bw/day based on rat developmental study with a Safety Factor of 100.

ARfD (acute reference dose): 0.035 mg/kg bw/day based on rat developmental study with a Safety Factor of 100.

Dermal absorption: 2.2% (*in vitro* human/rat and *in vivo* rat studies)

Reference

European Commission (2007): Review report for the active substance procymidone finalised in the Standing Committee on the Food Chain and Animal Health at its meeting on 3 March 2006 in view of the inclusion of procymidone in Annex I of Directive 91/414/EEC (SANCO/4064/2001 final, 5 January 2007)

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3.2.3 Description of ecotoxicological properties of the chemical

Fate and Behaviour

Soil

For aerobic soils, mineralization of 0.3% was reached after 122 days in acidic soil. The major metabolite formed was procymidone-NH-COOH which reached (after 14 days): 28.1% in neutral/alkaline soils but only 4.1% in acidic soils. The degradation pathway proceeds via a further molecular cleavage and small amounts of cyclopropane and chlorophenol derivatives may subsequently be formed.

For anaerobic soils the route of degradation is the same with procymidone-NH-COOH reaching 14.9% in neutral/alkaline soils and 4.0% in acidic soils.

The parent compound did not undergo photolysis.

The rate of procymidone degradation is pH dependent, being faster in alkaline than in acidic soils.

Alkaline/neutral soils: DT_{50}lab 20°C: 48-189 days

DT_{50}field: 17-158 days (N and S France)

DT_{90}lab 20°C: 675-1068 days

DT_{90}field: 56-525 days (N and S France)

Acidic soils: DT_{50}lab 20°C: 520-2381 days

DT_{50}field: 161-497 days (N and S France)

DT_{90}lab 20°C: n/a-8585 days

DT_{90}field: 535-1651 days (N and S France)

The rate of procymidone-NH-COOH degradation is pH dependent, being faster in acidic than in alkaline soils.

Alkaline soil: DT_{50}lab 20°C: 17.96 days

DT_{90}lab 20°C: 287.8 days

Neutral soil: DT_{50}lab 20°C: 13.03 days

DT_{90}lab 20°C: 32.18 days

Acidic soil: DT_{50}lab 20°C: 5.48 days

DT_{90}lab 20°C: 39.36 days

DT_{50} (lab 10°C, aerobic): 106-5236 Procymidone

12.1-39.5 Procymidone-NH-COOH

DT_{50} (lab 20°C, anaerobic): 4-5 months

No evidence of soil accumulation over 4 years in two neutral/alkaline soils (evidence of enhanced biodegradation).

Koc: 199-513 (mean value 378, pH of soil pH7), no pH dependence seen.

Mobility: Laboratory column leaching, in leachate 33.9% (parent), 32.8% (procymidone-NH-COOH) in worst case conditions.

Aged for 28 days in darkness at 25°C, amount in leachate, 4.4% (parent), 8.1% (procymidone-NH-COOH) in worst case conditions.

Water

Hydrolytic degradation

pH4 25°C Parent: 87.7-99 days, procymidone-NH-COOH: 0.7-1.0 days

pH5 30°C Parent: 62.1 days

pH7 25°C Parent: 16.9-17.2 days, procymidone-NH-COOH: 56-58 days

pH9 25°C Parent: 0.05-0.07 days, procymidone-NH-COOH: Stable

Major metabolites: Procymidone-NH-COOH, dichloroaniline (DCA), cyclopropane-$(COOH)_2$ (CCA)

Photolysis, Mainly hydrolysis, DT_{50} (1 metre depth): 66 days, major metabolite, Procymidone NH-COOH.

Not readily biodegradable in water.

Water/sediment study: DT_{50} and DT_{90} water

Biphasic, described by sequential first order equations:

1st phase (1st 1-2 days) DT_{50}: 0.5-1.1 d, DT_{90}: 1.8-3.6 d

2nd phase (1-2 days onwards) DT_{50}: 62-99d, DT_{90}: 205-329 d

DT_{50} and DT_{90} whole system

Biphasic described by sequential first order equations:

1st phase (1st 1-2 days) DT_{50}: 0.5-2.3 d, DT_{90}: 1.8-7 d

2nd phase (1-2 days onwards) DT_{50}: 187d, DT_{90}: 620 d

Distribution in water/sediment system

Max. in sediment: Parent = 32.7% after 100 days; Procymidone NH-COOH = 21.4% after 30 days

Air

Low vapour pressure

Photochemical oxidative degradation in air DT_{50}: 9.2 h (Atkinson calculation).

Ecotoxicity

Terrestrial vertebrates

Mammals

Acute toxicity: LD_{50} >5000 mg a.s/kg bw

Long term: NOEL = 50 ppm (12.5 mg/kg bw/day) multigeneration study

Birds

Acute toxicity: procymidone, quail, mallard LD_{50} >4092 mg a.s./kg bw (male), >7895 mg a.s./kg bw (female)

Procymidone 50 WP, LD_{50} bobwhite quail >2000 mg a.s./kg bw; LD_{50} >1020 mg a.s./kg bw

Dietary toxicity: quail LD_{50} >5200 ppm

Reproductive toxicity: Quail NOEC = 1000 ppm

Aquatic organisms

Fish

Acute toxicity:

Procymidone LC_{50} (flow through) = 7.22 mg/l

Procymidone LC_{50} >10 mg/l

Sumisclex 50WP LC_{50} (flow through) = 3.6 (1.8 mga.s./l)

Sumisclex 50WP LC_{50} = 537 (268 mg a.s./l)

Sumisclex 50WG LC_{50} = 25 (12.5 mg a.s./l)

Procymidone NH-COOH (semistatic) LC_{50} >92 mg/l

Long-term toxicity:

Procymidone NOEC = 0.48 mg/l

Invertebrates

Acute toxicity:

Daphnids, procymidone EC_{50} >1.8 mg/l

Daphnids, procymidone 50WP EC_{50} = 1.3 (0.47 mg a.s./l)

Daphnids, procymidone NH-COOH EC_{50} >95 mg/l

Chronic toxicity

Daphnids, procymidone NOEC = 0,99 mg/l

Algae

Algae, procymidone EC_{50} = 2.6 mg/l

Algae procymidone NH-COOH EC_{50} = 21 mg/l

Sediment dwelling organisms

Chironomus riparius, NOEC (28 days) = 0.12 mg a.s./l

Honey bees

Acute oral toxicity LD_{50} >100 µg a.s./bee

Acute contact toxicity LD_{50} >100 µg a.s./bee

Other arthropod species

Procymidone as a 50% WG formulation was tested in laboratory tests on parasitoids, predatory mites, foliage-dwelling species and ground-species *(Syrphus corollae, Chrysoperla carnea, Aphidus matricariae, Poecilus cupreus, Trichogramma cacoeciae, Amblyseius potentillae* and *Typhlodromus pyri).* Field studies on *Typhlodromus pyri* were also performed. Many field studies were difficult to interpret and application rates were often low, according to intended uses, but taken together, all these studies indicate that procymidone has a low toxicity for a variety of non-target terrestrial arthropods.

Earthworms

Acute toxicity

Procymidone LC_{50} >1000 mg a.s./kg soil

50% WG >519 mg a.s./kg soil

Procymidone NH-COOH >1000 mg/kg soil

Reproductive toxicity

50% SC NOEC = 3750 g a.s./ha

Soil micro-organisms

Nitrogen and carbon mineralization

effects of 2.0 and 20 mg preparation (50% WG)/kg soil <25%

Procymidone NH-COO-Na no effect at 0.5 and 2.5 mg/kg soil

Reference

European Commission (2007): Review report for the active substance procymidone finalised in the Standing Committee on the Food Chain and Animal Health at its meeting on 3 March 2006 in view of the inclusion of procymidone in Annex I of Directive 91/414/EEC (SANCO/4064/2001 final, 5 January 2007)

http://ec.europa.eu/food/plant/protection/evaluation/existactive/list_procymidone.pdf

SECTION 4 DESIGNATED NATIONAL AUTHORITY

Institution	European Commission
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Date, signature of DNA and official seal: 21.1.2013

EUROPEAN COMMISSION
DG ENVIRONMENT