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Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
Chemical Review Committee
Fourth meeting
Geneva, 10-13 March 2008
Item 5 (b) (iv) of the provisional agenda*

Inclusion of chemicals in Annex III of the Rotterdam Convention: review of notifications of final regulatory action to ban or severely restricted a chemical: methyl parathion

Methyl parathion

Note by the Secretariat

1. Article 5 of the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade provides that when the Secretariat has received at least one notification from each of two prior informed consent (PIC) regions regarding a particular chemical that is has verified meet the requirements of Annex I to the Convention it shall forward them to the Chemical Review Committee. The Committee shall review the information provided in such notifications and, in accordance with the criteria set out in Annex II, recommend to the Conference of the Parties whether the chemical in question should be included in Annex III and a decision guidance document drafted.

2. At its first meeting, the Chemical Review Committee reviewed one notification of final regulatory action related to methyl parathion from Europe (European Community). The Committee concluded that the notification met the requirements of the Rotterdam Convention. The rationale for the Committee's conclusion may be found in document UNEP/FAO/RC/CRC 4/6/Add.1.

3. The Secretariat has subsequently received two additional notifications relating to methyl parathion that meet the information requirements of Annex I from one PIC region (Latin America and Caribbean (Guyana and Dominican Republic)). Summaries of those notifications were included in PIC Circular XV of June 2007 and in PIC Circular XXVI of December 2007, respectively. The three notifications, as received from the notifying countries, are contained in the annex to the present note.

* UNEP/FAO/RC/CRC.4/1

K0763642 041107

4. Where available, the supporting documentation provided by the Dominican Republic and Guyana is set out in documents UNEP/FAO/RC/CRC.4/6/Add.2 and Add.3, respectively.

5. A list of other notifications previously considered by the Chemical Review Committee is set out in document UNEP/FAO/RC/CRC 4/INF/5.

Annex

Notification of final regulatory action for methyl parathion from European Community

Notification of final regulatory action for methyl parathion from Dominican Republic

Notification of final regulatory action for methyl parathion from Guyana

Interim 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 COMMUNITY

(Member States: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden and United Kingdom)

PART I: PROPERTIES, IDENTIFICATION AND USES

1.	IDENTITY OF CHEMICAL	
1.1	**Common name**	Parathion-methyl (BSI, E-ISO, (m) F-ISO); Synonyms: methyl parathion (ESA, JMAF); metaphos (USSR)
1.2	**Chemical name according to an internationally recognized nomenclature (e.g. IUPAC), where such nomenclature exists**	IUPAC: *O,O*-dimethyl O-4-nitrophenyl phosphorothioate CA: Phosphorothioic acid, *O,O*-dimethyl O-(4-nitrophenyl) ester
1.3	**Trade names and names of preparations**	- Formulation types: capsule suspension (CS); dustable powder (DP); emulsifiable concentrate (EC); ultra low volume liquid (UL); (wettable powder (WP). - Selected trade names: Folidol-M; Metacide; Cekumethion; Dhanuman; Faast; Fostox metil; Jiajiduiliulin; Morfos Methyl; Parataf; 'Paratox; Penncap-M; Sweeper; Thionyl; Bladan M; Declare; Dhanudol; Dipathio; Foley; Metpar; Metron; Paracrop; Prompt; R M Doll; R Methyl; Sabidol - Mixtures: Verecar T (+ tetradifon); Afidan M 40 (+ endosulfan); Seis-Tres (+ parathion); Sulfanex-Methyl (+ endosulfan); Veto (+ EPN) - Discontinued names: Methyl Bladan; Mefos
1.4	**Code numbers**	
1.4.1	**CAS number**	298-00-0
1.4.2	**Harmonized System customs code**	3808 10 40
1.4.3	**Other numbers (specify the numbering system)**	RTECS: TG0175 EINECS: 206-050-1 UN: 2783 CIPAC: 487

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.

PLEASE RETURN THE COMPLETED FORM TO:

Interim Secretariat for the Rotterdam Convention
Plant Protection Service
Plant Production and Protection Division, FAO
Viale delle Terme di Caracalla
00100 Rome, Italy

Tel: (+39 06) 5705 3441
Fax: (+39 06) 5705 6347
E-mail: pic@fao.org

OR

Interim Secretariat for the Rotterdam Convention
UNEP Chemicals

11-13, Chemin des Anémones
CH – 1219 Châtelaine, Geneva, Switzerland

Tel: (+41 22) 917 8183
Fax: (+41 22) 797 3460
E-mail: pic@unep.ch

1.5.2	θ This is a modification of a previous notification of final regulatory action on this chemical. The sections modified are: _____ θ This notification replaces all previously submitted notifications on this chemical.
	Date of issue of the previous notification: _____

1.6 Information on hazard classification where the chemical is subject to classification requirements	
International classification systems	**Hazard class**
WHO (IPCS 2000-2002)	Ia (Extremely hazardous)
IARC (1991, vol 53)	Not classifiable as to its carcinogenicity to humans (Group 3).
UN Classification	UN Hazard Class: 6.1
International Maritime Dangerous goods (IMDG) Code	Severe Marine pollutant, Airtight. Do not transport with food and feedstuffs.
Transport Emergency Card	TEC (R)-61G41a
Classification in the EU in accordance with Council Directive 67/548/EEC	T+ (Very toxic), R28 (Very toxic if swallowed) T (Toxic), R24 (Toxic in contact with skin)
Other classification systems	**Hazard class**

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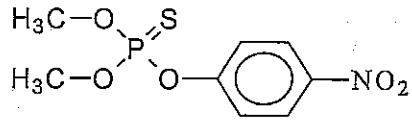
1.7 Use or uses of the chemical	
1.7.1	☑ **Pesticide**
	Describe the uses of the chemical as a pesticide in your country:
	Parathion-methyl is a non-systemic insecticide and acaricide used worldwide to control chewing and sucking insects in a very wide range of crops, such as cereals, fruits (including citrus), vines, vegetables, ornamentals, cotton, and field crops. Intended uses within the European Community were to control *Clysia ambiguella* (common names: Grape bud moth, Vine moth, Grape cochylis) on vines (grape vine and table grape) Good Agricultural Practices were considered for 1 to 3 spray applications at application rates of 0.3 kg parathion-methyl/ha.
1.7.2	θ **Industrial**
	Describe the industrial uses of the chemical in your country:
	No known use.

1.8 Properties

1.8.1 Description of physico-chemical properties of the chemical

Minimum purity	≥ 800 g/kg
FAO specification	≥ 950 g/Kg (FAO Specification 487/TK (2001))
Molecular Formula	$C_8H_{10}NO_5PS$
Molecular Mass	263.23
Structural Formula	
Appearance	Technical: liquid; Purified: powder.
Relative density	1.45 at 20 ± 1.0 °C, purity: > 99%
Melting point	36 - 37°C Purity: > 99%
Boiling point / decomposition	unstable to heat R 5; Heating may cause an explosion R 10; Flammable
Vapor pressure	2.26 x 10^{-3} Pa at 20°C. Purity > 99%.
Henry's law constant	1.21 x10^{-2} Pa.m^3/mol pH = 4 at 20°C 1.14 x10^{-2} Pa.m^3/mol pH = 7 at 20°C 1.16 x10^{-2} Pa.m^3/mol pH = 10 at 20°C
Solubility in water	pH = 4 49.0x10^{-3} g/l at 20 ± 1.0°C pH = 7 52.1x10^{-3} g/l at 20 ± 1.0°C pH =10 51.5x10^{-3} g/l at 20 ± 1.0°C
Solubility in organic solvents (at 25°C)	The solubility in dichloromethane, ethyl acetate, p-xylene, methanol and acetone was determined to be > 1000 g/l at room temperature; n-heptane 16.10 g/l at 20 ± 0.5°C. Purity > 99%
Partition coefficient (log P_{ow})	pH = 4 1019 ± 96 (log Pow 3.01) at 20 ± 1.0°C pH = 7 1058 ± 32 (log Pow 3.02) at 20 ± 1.0°C pH = 10 891.3 ± 119.7 (log Pow 2.95) at 20 ± 1.0°C Purity > 99%
Hydrolytic stability (DT_{50})	2 studies were available: pH = 5 DT_{50} = 68 days; main metabolite: monodesmethylparathion-methyl pH = 7 DT_{50} = 40 days; main metabolites: nearly equal amounts of 4-nitrophenol and monodesmethylparathion-methyl pH = 9 DT_{50} = 33 days; main metabolite: 4-nitrophenol Purity 99%. Or pH = 4 15x10^2 hours pH = 7 12x10^2 hours pH = 9 9.1x10^2 hours Purity > 99%; metabolites: not stated
Photostability (DT_{50})	A half-life of 8.6 days to sunlight was reported. A half-life of 100 days to darkness was reported.

Full Report on parathion-methyl (ECCO, October 2002) (copy extracts attached)

1.8.2 Description of toxicological properties of the chemical

Absorption, distribution, excretion and metabolism in mammals

Parathion-methyl is highly absorbed (>90%) and excreted within 48 hours (>99%), mainly via urine (76-92%). Parathion-methyl is extensively metabolised (desulfurization, dealkylation, sulfate conjugation, oxidation) and has no potential for accumulation.

Acute toxicity

LD_{50} (oral, rat)	3-20 mg/kg, (T+, very toxic)
LD_{50} (dermal, rat)	46-491 mg/kg (T, toxic)
LD_{50} (dermal, rabbit)	> 2000 mg/kg
LC_{50} (inhalation, nose only, 4 h, rat)	0.135 mg/l, (T+, very toxic)

Skin and eye irritation	non irritant
Sensitisation	non sensitiser (M & K)

Short term toxicity

The main effects of parathion-methyl during short-term studies are the inhibition of cholinesterase and retinal alterations. The lowest relevant levels identified were:

- Dogs (oral, 90 days): NOEL= 0.3 mg/kg bw
- Rats (dermal, 28 days): LOAEL = 0.3 mg/kg bw
- Rats (inhalation, 21 days): NOAEL = 0.0009 mg/l air

Genotoxicity: Mutagenic in tests *in vitro* in bacteria and in mammalian cells. Equivocal evidence of genotoxicity *in vivo* in rodent somatic cells. Not mutagenic in germ cells.

Long term toxicity

The main effects of parathion-methyl during long- term studies are the inhibition of cholinesterase activity, ocular atrophy and peripheral neuropathy. The lowest relevant levels identified were:
- Rats (oral, 2 years): NOEL = 0.1 mg/kg bw (2 ppm)

Carcinogenicity: no evidence of carcinogenicity.

Reproductive toxicity:

- Reproduction: NOAEL (rats, reproduction) = 0.1 mg/kg bw/d (2 ppm) Reduced litter size, reduced pup survival and growth.
- Development: NOAEL (rats, maternal and developmental) = 0.3 mg/kg bw/d. Increased postimplantation loss, reduced foetal growth with concomitant maternal toxicity (rats).

No developmental toxicity even at maternal toxic doses (rabbits).
No information on developmental neurotoxicity.

Neurotoxicity: No signs of single dose delayed neuropathy (hens). Neuropathy in 1 year rat study: NOEL = 0.5 ppm (approx. 0.02 mg/kg bw/d) LOAEL 2.5 ppm (about 0.2 mg/kg bw/d).

Human studies: Old human volunteer studies suggest inhibition of plasma and red blood cell cholinesterase activity at dose levels > 0.4 mg/kg bw/d and a NOAEL for cholinesterase inhibition of 0.3 mg/kg bw/d.

Admissible Daily Intake (ADI)	0.001mg/kg	study: 2 year rat	Safety factor 100
Acceptable Operator Exposure (AOEL)	0.003 mg/kg	study: 90 days dog	Safety factor 100
Acute Reference dose (ARfD)	0.03 mg/kg	human data	Safety factor 10

Full Report on parathion-methyl (ECCO, October 2002) (copy extracts attached)

1.8.3 Description of ecotoxicological properties of the chemical

Fate and behaviour

Soil: Parathion-methyl is not persistent in soil. Mineralisation after 120 days is about 60 % of the initial parathion-methyl treatment. Parathion-methyl degraded with half-lives of 12 to 22 days in laboratory studies. The main metabolite observed is p-nitrophenol.

Water:

- Ground water: Parathion-methyl is adsorbed and is not expected to leach in soil with water. Koc adsorption = 230 to 670.
- Surface water: hydrolysis half lives of parathion-methyl range from 33 to 68 days, depending of pH. Parathion-methyl is assumed to be biodegradable.

Air: volatilisation: 74% of the applied dose was lost from plant surfaces after 24 hours, whereas its volatilisation from soil was markedly lower.

Ecotoxicology:

- Terrestrial vertebrates

- Birds:	Acute toxicity	Mallard duck	LD_{50} = 5.3 mg a.s./kg bw
	Acute toxicity	Bobwhite quail	LD_{50} = 49 mg a.s./kg bw (microencapsulated formulation)
	Short term dietary	Japanese quail	LC_{50} = 79mg a.s./kg food(ppm)
	Reproductive tox	Bobwhite quail	NOEC = 0.58 mg a.s./kg bw (6.27 ppm)
- Mammals	Acute toxicity	Rat, oral	LC_{50} = 2.9 mg a.s./kg bw
		Rat, oral	LC_{50} > 1080 mg a.s./kg bw (microencapsulated formulation)

- Aquatic species

Fish	(96 hours)	*Oncorhynchus mykiss*	LC_{50} = 2.7 mg a.s. tech./l
	(35 days)	*Cyprinodon variegates*	NOEC = 0.012 mg a.s. tech/l
	(89 days)	*Oncorhynchus mykiss*	NOEC = 0.082 mg a.s. /l (microencaps.)
- Invertebrate	(48 hours)	*Daphnia magna*	EC_{50} = 0.0073 mg a.s. tech/l
	(48 hours)		EC_{50} < 0.0030 mg a.s./l (microencap)
	(21 days)	*Daphnia magna*	NOEC = 0.00043 mg a.s. tech/l (growth)
	(21 days)	*Daphnia magna*	NOEC = 0.00023 mg WP form./l
Algae	(96 hours)	*Scenedesmus suspicatus.*	EC_{50} = 0.1 mg a.s. tech./l (growth)
	(96 hours)	*Scenedesmus suspicatus*	EC_{50} = 1.9 mg 42% WP/l (growth)

Bioconcentration factor: 71

- Bees: LD_{50} (oral) = 0.013 µg a.s./bee. LD_{50} (contact) = 0.04 µg a.s./bee.
- Other arthropods:
  - Application rates ranging from 0.008 to 0.37 kg a.s./ha have produced 100 % mortality (laboratory test) in *A. bilineata, B. tetracolum, C. carnea, E. balteathus*, and *Coccinella septenpuncta* and caused 100% reduction of parasitism in *T. cacoecia.*
- Earthworm: Acute 0.019 < 14dLC_{50} < 0.192 kg a.s./kg (WP formulation)
  Sublethal: NOEC = 2 x 0.375 kg a.s./ha (=1 mg a.s./kg dry soil) (WP formulation)
- Soil micro-organisms: Nitrogen and carbon mineralisation: No effect up to 3.6 Kg a.i/ha in loamy sand and silt soil (WP formulation).

Full Report on parathion-methyl (ECCO, October 2002 (copy extracts attached)

PART II: FINAL REGULATORY ACTION

2.	FINAL REGULATORY ACTION			
2.1	**The chemical is:**	☑ **banned**	**OR**	θ **severely restricted**
2.2	**Information specific to the final regulatory action**			
2.2.1	**Summary of the final regulatory action** It is prohibited to place on the market or use plant protection products containing parathion-methyl. Parathion-methyl is not included as an authorised active ingredient in Annex I to Directive 91/414/EEC. The authorisations for plant protection products containing parathion-methyl had to be withdrawn within a period of 6 months from the date of adoption of the Commission Decision 2003/166/EC. From that date, no authorisations for plant protection products containing parathion-methyl could be granted or renewed.			
2.2.2	**Reference to the regulatory document** Commission Decision 2003/166/EC of 10/03/2003 concerning the non-inclusion of parathion-methyl in Annex I to Council Directive 91/414/EEC and the withdrawal of authorisations for plant protection products containing this active substance (Official Journal of the European Union L67 of 12/03/2003, pp. 18-19) (copy attached, available at http://europa.eu.int/eur-lex/en/archive/2003/l_06720030312en.html).			
2.2.3	**Date of entry into force of the final regulatory action** 9 September 2003. Authorisations for plant protection products containing parathion-methyl had to be withdrawn within a period of six months from the date of the final regulatory action.			

2.3	**Was the final regulatory action based on a risk or hazard evaluation?**	☑ **Yes**	θ **No**
	If yes, give information on such evaluation Directive 91/414/EEC provides for the European Commission to carry out a programme of work for the examination of existing active substances used in plant protection products which were already on the market on 25 July 1993, with a view to their possible inclusion in Annex I to the Directive. Within this context, a number of companies notified their wish to secure the inclusion of parathion-methyl as an authorised active ingredient. A Member State was designated to undertake a hazard and risk assessment based on the dossier submitted by the notifiers. The assessment report was subjected to peer review, during which the Commission undertook extensive consultations with experts of the Member States as well as with the main notifier. The results were then reviewed by the Member States and the Commission within the Standing Committee on the Food Chain and Animal Health (SCFCAH) before a final decision was taken. The evaluation was based on the review of scientific data generated for parathion-methyl and for the use of a representative formulation in the context of the conditions prevailing in the European Community (intended uses, recommended application rates, good agricultural practices).Only data that had been generated according to scientifically recognized methods were validated and used for the evaluation. Moreover data reviews were performed and documented according to generally recognized scientific principles and procedures. It was concluded that parathion-methyl was not demonstrated to fulfil the safety requirements laid down in Article 5 (1) (a) and (b) of Directive 91/414/EEC. The following areas of concern were identified: the safety of operators potentially exposed to parathion-methyl; and the possible impact of the substance on non-target insects, birds and mammals. In addition available data were insufficient concerning the following: identity, physical and chemical properties and methods of analysis, the environmental fate and ecotoxicology of the substance; certain aspects concerning mammalian toxicology; plant metabolism and residues in treated crops.		
	Reference to the relevant documentation Review report for the active substance parathion-methyl 2665/01-final: 18 October 2002 (copy attached) and supporting background documents (dossier, monograph, and the peer review report under the Peer review Programme (ECCO, October 2002)		

2.4	Reasons for the final regulatory action	
2.4.1	**Is the reason for the final regulatory action relevant to the human health?**	☑ Yes θ No

If yes, give summary of the known hazards and risks presented by the chemical to human health, including the health of consumers and workers

Final regulatory action was taken to protect operators applying plant protection products containing parathion-methyl.

The principal issues which lead to these overall conclusions relate mainly to concerns about operator exposure. Exposure scenarios using UK Predictive Operator Exposure Model demonstrated that operator exposure was unacceptable for the proposed uses within the European Community (grapevines and table grapes). The estimated exposure exceeded the acceptable operator exposure level (AOEL) during the mixing/loading and the application operations, even when personal protective equipment (PPE) was worn. Using the German Model, scenarios for high crops/tractor mounted applications were acceptable using PPE, but not for high crops/hand held scenarios.

A safe use for consumers exposed to potential residues resulting from the use of these plant protection products was not demonstrated. No metabolism data relevant to grapes (and processed products) were available. The notifier provided data on several crop residues, from which no extrapolation was possible, thus preventing an adequate risk assessment . Moreover this was not considered necessary as it was already demonstrated that the use of parathion -methyl was not safe for operators, which was sufficient grounds to take the final regulatory action.

Reference to the relevant documentation

Review report for the active substance parathion-methyl 2665/01-final: 18 October 2002 (copy attached) and supporting background documents (dossier, monograph, and the peer review report under the Peer review Programme (ECCO, October 2002)

Expected effect of the final regulatory action

Complete reduction of risk from plant protection uses.

2.4.2	**Is the reason for the final regulatory action relevant to the environment?**	☑ Yes θ No

If yes, give summary of the known hazards and risks to the environment

Final regulatory action was taken to protect non-target organisms.
Concerns were identified with regard to:
- Insectivorous birds: the acute and long-term risk was found unacceptable following the use of parathion-methyl on vines at the application rate of 0.3 kg a.s./ha, based on technical material data.
- Herbivorous mammals: the acute risk was found unacceptable following the use of parathion-methyl on vines at the application rate of 0.3 kg a.s./ha, based on technical material data.
The risk associated with the use of microencapsulated formulation was acceptable.
- Aquatic vertebrates: The risk evaluation based on data from both technical material and formulations found an unacceptable risk at the application rate of 0.3 kg a.s./ha on vines. The risk could be acceptable when mitigation measures (buffer zone) were used.
- Aquatic invertebrates: The acute and chronic risk associated with the use of both technical material and microencapsulated formulations was unacceptable at the application rate of 0.3 kg a.s./ha on vines, even when a buffer zone of 50 m was considered.
- High toxicity was recorded for non-target arthropods, and the long-term risk to earthworms was unacceptable.

Reference to the relevant documentation

Review report for the active substance parathion-methyl 2665/01-final: 18 October 2002(copy attached) and supporting background documents (dossier, monograph, and the peer review report under the Peer review Programme (ECCO, October 2002)

Expected effect of the final regulatory action

Complete reduction of risk from plant protection uses

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

2.5.1	**Final regulatory action has been taken for the chemical category**	θ **Industrial**
	Use or uses prohibited by the final regulatory action	
	Not relevant	
	Use or uses that remain allowed	
	No known industrial uses. Not relevant.	

2.5.2	Final regulatory action has been taken for the chemical category	☑ Pesticide
	Formulation(s) and use or uses prohibited by the final regulatory action	
	All applications as plant protection product.	
	Formulation(s) and use or uses that remain allowed	
	EC Member States may have granted a period of grace for disposal, storage, placing on the market and use of existing stocks, no longer than 18months from the date of adoption of Commission Decision 2003/166/EC (*i.e.* until 9 September 2004).	

2.5.3 Estimated quantity of the chemical produced, imported, exported and used, where available.		
	Quantity per year (MT)	**Year**
Produced	Not available	
Imported	Not available	
Exported	Not available	
Used	Not available	

2.6	**Indication, to the extent possible, of the likely relevance of the final regulatory action to other states and regions**
	The final regulatory action was taken in light of the conclusions of the risk evaluation performed for uses as proposed in Northern and Southern European Member States, which covered a large and diverse geographic area. Similar health and environmental problems are likely to be encountered in other countries where substance is used, particularly in developing countries.

2.7	**Other relevant information that may cover:**
2.7.1	**Assessment of socio-economic effects of the final regulatory action**

2.7.2	**Information on alternatives and their relative risks**
	Intended uses within the European Community were to control *Clysia ambiguella* (common names: Grape bud moth, Vine moth, Grape cochylis) on vines (grape vine and table grape). Biological agents, such as Trichogrammatidae, genre Trichogramma may be used to combat *Clysia ambiguella.*
2.7.3	**Relevant additional information**

PART III : GOVERNMENT AUTHORITIES

Ministry/Department and authority responsible for issuing/enforcing the final regulatory action	
Institution	European Commission
Address	Rue de la Loi, 200 B-1049 Brussels Belgium
Telephone	+322 299 48 60
Telefax	+322 299 8558
E-mail address	klaus.berend@cec.eu.int
Designated National Authority	
Institution	DG Environment European Commission
Address	Rue de la Loi, 200 B-1049 Brussels Belgium
Name of person in charge	Klaus BEREND
Position of person in charge	Administrator
Telephone	+322 299 48 60
Telefax	+322 296 76 17
E-mail address	env-pic@cec.eu.int

Date, signature of DNA and official seal: 8.10.03

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

IMPORTANT: See instructions before filling in the form

COUNTRY: DOMINICAN REPUBLIC

PART I: PROPERTIES, IDENTIFICATION AND USES

1.	**IDENTITY OF CHEMICAL**	
1.1	**Common name**	Parathion-methyl
1.2	**Chemical name according to an internationally recognized nomenclature (e.g. IUPAC), where such nomenclature exists**	O,O-DIMETHYL O-(4-NITROPHENYL) PHOSPHOROTIOATE
1.3	**Trade names and names of preparations**	NIRAN 45 EC, ETYL PARATHION50 EC
1.4	**Code numbers**	
1.4.1	**CAS number**	298-00-0
1.4.2	**Harmonized System customs code**	
1.4.3	**Other numbers (specify the numbering system)**	

1.5	**Indication regarding previous notification on this chemical, if any**
1.5.1	X This is a first time notification of final regulatory action on this chemical.
1.5.2	► This is a modification of a previous notification of final regulatory action on this chemical. The sections modified are: _____ ► This notification replaces all previously submitted notifications on this chemical.
	Date of issue of the previous notification: _____

PLEASE RETURN THE COMPLETED FORM TO:

Secretariat for the Rotterdam Convention
Plant Protection Service
Plant Production and Protection Division, FAO
Viale delle Terme di Caracalla
00100 Rome, Italy

Tel: (+39 06) 5705 3441
Fax: (+39 06) 5705 6347
E-mail: pic@fao.org

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Secretariat for the Rotterdam Convention
UNEP Chemicals
11-13, Chemin des Anémones
CH – 1219 Châtelaine, Geneva, Switzerland

Tel: (+41 22) 917 8183
Fax: (+41 22) 797 3460
E-mail: pic@unep.ch

1.6 Information on hazard classification where the chemical is subject to classification requirements	
International classification systems	**Hazard class**
WHO	Extremely harmful
Other classification systems	**Hazard class**
United Nations	Poisonous substance
EPA	B2; possible carcinogenic for humans
EU	Toxic, carcinogenic Cat. III
CIIC	2B Group (possible carcinogenic for humans)

1.7	**Use or uses of the chemical**
1.7.1	X **Pesticide**
	Describe the uses of the chemical as a pesticide in your country:
	Product used to control crops plagues
1.7.2	► **Industrial**
	Describe the industrial uses of the chemical in your country:
	None

1.8	**Properties**
1.8.1	**Description of physico-chemical properties of the chemical**
	Methyl Parathion is a light brown liquid. Fusion point 35°- 36°C. With a specific gravity at 20°C = 1.36, Pressure steam 0.2 m Pa at 20°C. The thermal decomposition can produce among others Dimethyl sulphide, carbon monoxide, carbon dioxide. Compatible with most of the pesticides not alkaline. Highly soluble in n-hexane and soluble in Dichloromethane.

1.8.2	**Description of toxicological properties of the chemical**

	LD 50 oral: 6.0 mg/kg, dermal DL 50: 67.0 mg/kg
1.8.3	**Description of ecotoxicological properties of the chemical**
	This substance can be dangerous for the environment, especially for aquatic organisms, some terrestrial species and birds. Along the food chain of interest to humans, there is a particularly bioaccumulation in aquatic species.

PART II: FINAL REGULATORY ACTION

2.	**FINAL REGULATORY ACTION**	
2.1	**The chemical is:** X **banned** **OR** ► **severely restricted**	
2.2	**Information specific to the final regulatory action**	
2.2.1	**Summary of the final regulatory action**	
	Import, processing, formulation, marketing and use are banned.	
2.2.2	**Reference to the regulatory document**	
	Decree 217 of year 1991. Minister of State for Agriculture	
2.2.3	**Date of entry into force of the final regulatory action**	
	4th. June 1991	

2.3	**Was the final regulatory action based on a risk or hazard evaluation?**	X **Yes** ► **No**
	If yes, give information on such evaluation	

	The evaluation was to prevent the human health and the environment by the indiscriminate use of the product.
	Reference to the relevant documentation
	Decree 217 of year 1991. Minister of State for Agriculture

2.4	**Reasons for the final regulatory action**	
2.4.1	**Is the reason for the final regulatory action relevant to the human health?**	**X Yes ► No**
	If yes, give summary of the known hazards and risks presented by the chemical to human health, including the health of consumers and workers	
	This product is persistent residual therefore offers risk and harm to humans. The product deposits in major organs of the human body, and workers and applicators, not having the protection required for its handling, run the risk of irreversible long-term pathologies, which are the chronic effects of the product	
	Reference to the relevant documentation	
	Decree 217 of year 1991. Minister of State for Agriculture	
	Expected effect of the final regulatory action	
	Risk reduction for the human health	

2.4.2	**Is the reason for the final regulatory action relevant to the environment?**	**X Yes ► No**
	If yes, give summary of the known hazards and risks to the environment	
	Methyl parathion is extremely toxic for fish and aquatic invertebrates. It is bioaccumulative.	
	Reference to the relevant documentation	

	Decree 217 of year 1991. Minister of State for Agriculture
	Expected effect of the final regulatory action
	Risk reduction for the environment and also for the human health

2.5	**Category or categories where the final regulatory action has been taken**	
2.5.1	**Final regulatory action has been taken for the chemical category**	► **Industrial**
	Use or uses prohibited by the final regulatory action	
	All use	
	Use or uses that remain allowed	
	None	

2.5.2	**Final regulatory action has been taken for the chemical category**	X **Pesticide**
	Formulation(s) and use or uses prohibited by the final regulatory action	
	All	
	Formulation(s) and use or uses that remain allowed	
	None	

2.5.3 Estimated quantity of the chemical produced, imported, exported and used, where available.

	Quantity per year (MT)	Year
Produced		
Imported		
Exported		
Used		

2.6	**Indication, to the extent possible, of the likely relevance of the final regulatory action to other states and regions**
	For non-commercial traffic with other countries and its side effects on economy

2.7	**Other relevant information that may cover:**
2.7.1	**Assessment of socio-economic effects of the final regulatory action**
	Reduction of risks and dangers to which the human was exposed by the persistent residual of this product and what this avoids the State

2.7.2	**Information on alternatives and their relative risks**

	An alternative is the use of other pesticides with less risks and take into account the application of the system of Integrated Pest Management
2.7.3	**Relevant additional information** Obtain assistance on management of BPA

PART III : GOVERNMENT AUTHORITIES

Ministry/Department and authority responsible for issuing/enforcing the final regulatory action	
Institution	Secretaría de Estado de Agricultura (Minister of State for Agriculture)
Address	Autopista Duarte Km. 61/2, Santo Domingo
Telephone	809 547-3888 ext 4105
Telefax	809 562 8939
E-mail address	sanidadvegetal@agricultura.gov.do
Designated National Authority	
Institution	Secretaría de Estado de Agricultura
Address	Autopista Duarte Km. 61/2, Santo Domingo
Name of person in charge	Ing. Agr. Luis L. Garrido
Position of person in charge	Director of Plant Health department
Telephone	809 547-3888 ext 4100/4105
Telefax	809 562 8939
E-mail address	sanidadvegetal@agricultura.gov.do

Date, signature of DNA and official seal: ___03/Oct/2006_____

Secretaría Provisional del Convenio de Rotterdam sobre el procedimiento de consentimiento fundamentado previo aplicable a ciertos plaguicidas y productos químicos peligrosos objeto de comercio internacional

UNEP

FORMULARIO
NOTIFICACIÓN DE MEDIDA REGLAMENTARIA FIRME PARA PROHIBIR O RESTRINGIR RIGUROSAMENTE UN PRODUCTO QUÍMICO

IMPORTANTE: Véanse las instrucciones antes de rellenar el formulario

PAÍS: República Dominicana

PARTE I: PROPIEDADES, IDENTIFICACIÓN Y USOS

1.	**IDENTIDAD DEL PRODUCTO QUÍMICO**	
1.1	**Nombre común**	METIL-PARATION
1.2	**Nombre del producto químico en una nomenclatura internacionalmente reconocida (por ejemplo, la de la UIQPA), si tal nomenclatura existe**	O,O-DIMETHYL O-(4-NITROPHENYL) PHOSPHOROTHIOATE
1.3	**Nombres comerciales y nombres de las preparaciones**	NIRAN 45 EC, ETIL PARATION 50 EC
1.4	**Números de código**	
1.4.1	**Número CAS**	298-00-0
1.4.2	**Código aduanero del Sistema Armonizado**	
1.4.3	**Otros números (especificar el sistema de numeración)**	

1.5	**Indicación respecto de una notificación anterior sobre este producto químico, si la hubiere**
1.5.1	(x) La presente es una primera notificación de una medida reglamentaria firme respecto de este producto químico.
1.5.2	θ La presente es una modificación de una medida reglamentaria firme de una notificación presentada anteriormente respecto de este producto químico. θ Esta notificación sustituye todas las notificaciones presentadas con anterioridad respecto de este producto químico.
	Fecha de emisión de la notificación anterior: _____
1.6	**Información sobre clasificación de peligros, si el producto químico está sujeto a requisitos de**

SÍRVASE ENVIAR EL FORMULARIO RELLENADO DE VUELTA A:

Secretaría provisional del Convenio de Rotterdam
Plant Protection Service
Plant Production and Protection Division, FAO
Viale delle Terme di Caracalla
00100 Rome, Italy
Téléfono: (+39 06) 5705 3441

o

Secretaría provisional del Convenio de Rotterdam
UNEP Chemicals
11-13, Chemin des Anémones
CH – 1219 Châtelaine, Geneva, Switzerland
Téléfono: (+41 22) 917 8183

clasificación	
Sistemas de clasificación internacionales	**Categoría de peligro**
OMS	Extremadamente peligroso
Otros sistemas de clasificación	**Categoría de peligro**
Naciones Unidas	Sustancia venenosa.
EPA	B2; posible carcinógeno humano.
UE	Tóxico, carcinógeno Cat. III
CIIC	Grupo 2B (posible carcinógeno para los seres humanos).

1.7 Uso o usos del producto químico

1.7.1 (x) **Plaguicida**

Describa los usos del producto químico como plaguicida en su país:

El producto se utilizaba en el control de plagas de cultivos.

1.7.2 θ **Industrial**

Describa los usos industriales del producto químico en su país:

Ninguno

1.8 Propiedades

1.8.1 Descripción de las propiedades físico-químicas

El Metil Paration es un liquido marrón claro . Punto de fusión: .35-36 °C, con una gravedad especifica de 20 °C, = 1.36. presión de vapor de 0.2 mPa.a 20 °C. La descomposición Termal puede producir Dimetil sulfide, Monóxido de carbono, Dióxido de carbono entre otros. Compatible con la mayoría de los plaguicidas no alcalinos. Fuertemente soluble en n-hexano y soluble en Diclorometano,

1.8.2 Descripción de las propiedades toxicológicas

LD50 oral 6.0 mg/kg Dermal DL_{50}:67.0 mg/kg

1.8.3 Descripción de las propiedades ecotoxicológicas

Esta sustancia puede ser peligrosa para el ambiente; especial a los organismos acuáticos, algunas especies terrestres y a las aves. A lo largo de la cadena alimentaria de interés para el ser humano, se produce una bioacumulación, especialmente en las especies acuáticas.

PARTE II. MEDIDA REGLAMENTARIA FIRME

2. MEDIDA REGLAMENTARIA FIRME

2.1 El producto químico está: (x) **prohibido** **O** θ **rigurosamente restringido**

2.2 Información específica sobre la medida reglamentaria firme

2.2.1 Resumen de la medida reglamentaria firme

Se prohíbe la importación, elaboración, formulación, comercialización y uso.

2.2.2	**Referencia al documento reglamentario** Decreto 217 del año 1991, de la Secretaría de Estado de Agricultura.	
2.2.3	**Fecha de entrada en vigor de la medida reglamentaria firme** 4 de Junio de 1991	
2.3	**La medida reglamentaria firme se tomó sobre la base de una evaluación de los riesgos o peligros?**	(x) Sí () No
	En caso afirmativo, proporcione información sobre dicha evaluación Esta evaluación se tomó de manera preventiva a la salud humana y al ambiente, por el uso indiscriminado del mismo	
	Referencia a la documentación pertinente Decreto 217 del año 1991, de la Secretaría de Estado de Agricultura.	
2.4	**Motivos para tomar la medida reglamentaria firme**	
2.4.1	**El motivo por el que se adoptó la medida reglamentaria firme guarda relación con la salud humana?**	(x) Sí θ No
	En caso afirmativo, proporcione un resumen de los peligros y los riesgos conocidos que el producto químico plantea para la salud humana, incluida la salud de los consumidores y de los trabajadores Este producto es de residualidad persistente por lo que ofrece riesgo y peligro al humano Al producto se deposita en órganos importante del cuerpo humano, y los trabajadores o aplacadores de agroquímicos no tener la protección requerida en este trabajo, corren el riesgo de sufrir patologías irreversibles a largo plazo, que son los efectos crónicos del producto.	
	Referencia a la documentación pertinente Decreto 217 del año 1991, de la Secretaría de Estado de Agricultura.	
	Efecto previsto de la medida reglamentaria firme Se espera que la medida reglamentaria firme alcance una reducción de riesgo en la salud humana.	
2.4.2	**El motivo por el que se adoptó la medida reglamentaria firme guarda relación con el medio ambiente?**	(x) Sí θ No
	En caso afirmativo, proporcione un resumen de los peligros y riesgos conocidos respecto del medio ambiente El Metil Paration es extremadamente tóxico para los peces y los invertebrados acuáticos. Es bioacumulativo.	
	Referencia a la documentación pertinente Decreto 217 del año 1991, de la Secretaría de Estado de Agricultura.	
	Efecto previsto de la medida reglamentaria firme Se espera que la medida reglamentaria firme alcance una reducción de riesgo tanto en el ambiente. Como en la salud humana	

2.5	**Categoría o categorías con respecto a las cuales se ha adoptado la medida reglamentaria firme**	
2.5.1	**La medida reglamentaria firme se ha tomado para la categoría del producto químico**	θ **Industrial**
	Uso o usos prohibidos por la medida reglamentaria firme	
	TODO	
	Uso o usos que se siguen autorizando	
	NINGUNO	
2.5.2	**La medida reglamentaria firme se ha tomado para la categoría del producto químico**	(x) **Plaguicida**
	Formulación (o formulaciones) y uso (o usos) prohibidos por la medida reglamentaria firme	
	Todos los usos	
	Formulación o formulaciones y uso o usos que se siguen autorizando	
	Ninguno	

2.5.3 Estimación de las cantidades del producto químico producido, importado, exportado y utilizado, en los casos en que se disponga de ese dato, si fuese posible

	Cantidad al año (TM)	Año
Se produce		
Se importa		
Se exporta		
Se usa		

2.6 Indicación, en la medida de lo posible, de la probabilidad de que la medida reglamentaria firme afecte a otros Estados o regiones

POR EL NO TRASIEGO COMERCIAL CON OTROS PAISES Y SUS EFECTOS COLATERALES EN LO ECONOMICO.

2.7 Información adicional pertinente que puede incluir:

2.7.1 Una evaluación de los efectos socioeconómicos de la medida reglamentaria firme

Reducción de los riesgos y peligros a que el humano estaba expuesto por ser este producto de residualidad Persistente, y lo que esto evita al Estado.

2.7.2 Información sobre alternativas y sus riesgos relativos

Una alternativa es el uso de otros plaguicidas de menores riesgos y tomar en cuenta la aplicación del sistema de Manejo Integrado de plagas

2.7.3 Información complementaria pertinente

Obtener asistencia sobre manejo de BPA

PARTE III: AUTORIDADES GUBERNAMENTALES

Ministerio/Departamento y autoridad encargada de la emisión/aplicación de la medida reglamentaria firme	
Institución	Secretaria de Estado de Agricultura
Dirección	Autopista Duarte km.61/2,Sto.Dgo.
Teléfono	809 547-3888 Ext. 4105
Telefax	809 562 8939
Dirección electrónica	SANIDAD VEGETAL @AGRICULTURA.GOV.DO.
Autoridad nacional designada	
Institución	Secretaria de Estado de Agricultura
Dirección	Autopista Duarte km.61/2,Sto.Dgo.
Nombre de la persona responsable	ING. AGRON. LUIS R. GARRIDO
Cargo de la persona responsable	Director Departamento de Sanidad Vegetal
Teléfono	(809) 547-3888, 4100-4105
Telefax	(809) 562 –8939
Dirección electrónica	SANIDAD VEGETAL @AGRICULTURA.GOV.DO

Fecha, firma de la autoridad nacional designada y sello oficial: 03/10/2006

SECRETARIA DE ESTADO DE AGRICULTURA * DEPTO. DE SANIDAD VEGETAL * República Dominicana

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:	Guyana

SECTION 1 IDENTITY OF CHEMICAL SUBJECT TO THE FINAL REGULATORY ACTION

1.1	**Common name**	**Methyl Parathion**
1.2	**Chemical name according to an internationally recognized nomenclature (e.g. IUPAC), where such nomenclature exists**	**O,O-dimethyl O-4-nitrophenyl phosphorothioate (IUPAC)**
1.3	**Trade names and names of preparations**	
1.4	**Code numbers**	
1.4.1	CAS number	298-00-0
1.4.2	Harmonized System customs code	3808.50
1.4.3	Other numbers (specify the numbering system)	Not Applicable

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

Pesticides and Toxic Chemicals Control (Prohibited Pesticides) Order No. 22 of 2006 made under the Pesticides and Toxic Chemicals Control Act 2000 (No 13 of 2000) prohibits the importation, sale and use of Methyl Parathion or any substance in any form containing Methyl Parathion.

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

The Official Gazette (Legal Supplement) - B dated 18th November 2006.

2.2.3 Date of entry into force of the final regulatory action

10th day of October 2006

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

No known use of the chemical in Guyana prior to the final regulatory action.

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

Use or uses prohibited by the final regulatory action

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

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

All formulation or preparation and all use prohibited by the final regulatory action.

Formulation(s) and use or uses that remain allowed

(only in case of a severe restriction)

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

Reference to the Decision Guidance Document as prepared by UNEP and FAO.

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

Acute hazard classification and concern as to its impact on human health under conditions of use in developing countries.

Expected effect of the final regulatory action

Reduce or no exposure to this chemical to farmers and farm workers.

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

Expected effect of the final regulatory action

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	Nil	-
imported	Nil	-
exported	Nil	-
used	Nil	-

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

Not applicable

2.5.3 Other relevant information that may cover:

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

None expected since this product has never been imported or used in the country.

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

None

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

None

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

None

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	I a

Other classification systems e.g. EU, USEPA	**Hazard class**
USEPA	I

3.2 Further information on the properties of the chemical

3.2.1 Description of physico-chemical properties of the chemical

Colourless, odourless crystals; (tech., light to dark tan-coloured liquid). M.p. 35-36 ºC; (tech., c. 29 ºC) B.p. 154 ºC/136 Pa V.p. 0.2 mPa (20 ºC); 0.41 mPa (25 ºC) Kow logP = 3.0 Henry 8.57 □· 10-3 Pa m3 mol-1 S.g./density 1.358 (20 ºC); (tech., 1.20-1.22) Solubility In water 55 mg/l (20 ºC). Readily soluble in common organic solvents. Sparingly soluble in petroleum ether and some types of mineral oil.

Reference

The Pesticide Manual 13th Edition - Editor CDS Tomlin

3.2.2 Description of toxicological properties of the chemical

Acute oral LD50 for rats c. 3, male mice c. 30, male and female rabbits 19 mg/kg.

Reference

The Pesticide Manual 13th Edition - Editor CDS Tomlin

3.2.3 Description of ecotoxicological properties of the chemical

Toxic to bees and other beneficial organisms

Reference

The Pesticide Manual 13th Edition - Editor CDS Tomlin

SECTION 4 DESIGNATED NATIONAL AUTHORITY

Institution	Pesticides and Toxic Chemicals Control Board
Address	2nd Flat, 18 Brickdam, Stabroek, Georgetown, Guyana.
Name of person in charge	Basudeo Dwarka
Position of person in charge	Registrar, Pesticides and Toxic Chemicals
Telephone	592-225-1045
Telefax	592-225-0954
E-mail address	ptccb@guyana.net.gy

AUG 20 2007

Date, signature of DNA and official seal: