



**Rotterdam Convention on the Prior
Informed Consent Procedure for
Certain Hazardous Chemicals and
Pesticides in International Trade**

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Chemical Review Committee

Sixth meeting

Geneva, 15–19 March 2010

Item 5 (b) (iii) of the provisional agenda*

**Listing of chemicals in Annex III to the Rotterdam Convention:
review of notifications of final regulatory actions to ban or severely
restrict a chemical: endosulfan**

**Information on endosulfan available to the Chemical Review
Committee and the Conference of the Parties, including the
notification of final regulatory action from Thailand**

Note by the Secretariat

1. At its second meeting, the Chemical Review Committee reviewed the notifications of final regulatory actions for endosulfan from the Netherlands and Thailand, including the supporting documentation referenced therein, and, taking into account each of the specific requirements set out in Annex II to the Rotterdam Convention, concluded that the requirements of that Annex had been met. Accordingly, the Committee agreed to recommend to the Conference of the Parties that endosulfan should be listed in Annex III to the Rotterdam Convention and proceeded to draft a decision guidance document.
2. At its third meeting, the Committee finalized the draft decision guidance document and forwarded it to the Conference of the Parties for consideration at its fourth meeting, with a recommendation that endosulfan should be included in Annex III to the Rotterdam Convention. The text of that recommendation, a rationale, a tabular summary of comments received on the draft decision guidance document and how they were addressed and the draft decision guidance document itself can be found in document UNEP/FAO/RC/COP.4/9.
3. In the light of the revised legal opinion on intentional misuse requested at the fourth meeting of the Conference of the Parties (available in document UNEP/FAO/RC/CRC.6/10), the Committee may wish to revisit the notification submitted by Thailand that it originally considered at its second meeting when it agreed that the notification met the requirements of the Convention. The notification, originally provided as document UNEP/FAO/RC/CRC.2/15, has been reproduced without changes in the annex to the present note.

* UNEP/FAO/RC/CRC.6/1.

4. The supporting documentation submitted by Thailand and originally provided to the Committee at its second meeting has been reproduced without changes in document UNEP/FAO/RC/CRC.6/15/Add.1.
5. The rationale for the Committee's conclusion that the notification from Thailand met the requirements of the Convention has been reproduced without changes in document UNEP/FAO/RC/CRC.6/15/Add.2.

Annex

Notification of final regulatory action on endosulfan by Thailand



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

IMPORTANT: See instructions before filling in the form

COUNTRY: Thailand

PART I: PROPERTIES, IDENTIFICATION AND USES

1. IDENTITY OF CHEMICAL		
1.1	Common name	endosulfan
1.2	Chemical name according to an internationally recognized nomenclature (e.g. IUPAC), where such nomenclature exists	(1,4,5,6,7,7-hexachloro-8,9,10-trinorborn-5-en-2,3-ylene=bismethylene) sulfite
1.3	Trade names and names of Preparations	Thiodan
1.4	Code numbers	OMS 204 (α); OMS 205(β); OMS 570; ENT 23979
1.4.1	CAS number	[115-29-7]
1.4.2	Harmonized System customs code	
1.4.3	Other numbers (specify the numbering system)	EEC no. 204-079-4

1.5	Indication regarding previous notification on this chemical, if any	
1.5.1	<input checked="" type="checkbox"/> This is a first time notification of final regulatory action on this chemical	
1.5.2	<input type="checkbox"/> This is a modification of a previous notification of final regulatory action on this chemical. The sections modified are: <input type="checkbox"/> This notification replaces all previously submitted notifications on this chemical.	
	Date of issue of the previous notification: _____	

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: (+4122) 917 8183
Fax: (+4122) 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 (Technical Product)	II
Other classification systems	Hazard class
EPA (formulation)	I
EC hazard	T; R 24/25 Xi; R36 N; R50; R 53

1.7 Use or uses of the chemical	
1.7.1	<input checked="" type="checkbox"/> Pesticide
	Describe the uses of the chemical as a pesticide in your country:
	Used for controlling <ul style="list-style-type: none"> - aphids and leafhoppers in cotton - webworm and hawk moth worm in sesame - berryborer in coffee
1.7.2	<input type="checkbox"/> Industrial
	Describe the industrial uses of the chemical in your country:

1.8 Properties	
1.8.1	Description of physico-chemical properties of the chemical
	Molecular weight = 406.9, molecular formula = $C_9H_6Cl_6O_3S$. Form : colourless crystal (tech. Cream to brown, mostly beige). Melting point ≥ 80 °C; (tech.); α -109.2 °C; β -213.3 °C. Vapour pressure = 0.83 mPa (20 °C) for 2:1 mixture of α - and β - isomers. K_{ow} logP for α - = 4.74; β - = 4.79 (both at pH 5). Henry for α - = 1.48; β - = 0.07 (both Pa m ³ mol ⁻¹ , 22 °C, calc.) Specific gravity /density c. 1.8 (20 °C) (tech.). Solubility in water alpha-endosulfan = 0.32, beta-endosulfan = 0.33 (both in mg/l, 22 °C). In ethyl acetate, dichloromethane, toluene 200, ethanol c. 65, hexane c. 24 (all in g/l, at 20 °C). Stability: stable to sunlight. Slowly hydrolysed in aqueous acids and alkalis, with the formation of the diol and sulfur dioxide.

1.8.2	<p>Description of toxicological properties of the chemical</p> <p>Acute oral LD₅₀ for rats 70 mg(in aqueous suspension)/kg, 110 mg tech.(in oil)/kg, 76 mg alpha-isomer/kg, 240 g beta-isomer/kg; for dogs 77 mg tech./kg. Skin and eye: Accute percutaneous LD₅₀ for rabbits 359 mg(in oil)/kg; for male rats > 4000, female rats 500 mg/kg. Inhalation LC₅₀ (4h) for male rats 0.0345, female rats 0.0126 mg/l . NOEL (2 years) for rats = 15 ppm diet; (1 year) for dogs 10 ppm diet. ADI (JMPR) 0.006mg/kg body weight.[1998].</p>
1.8.3	<p>Description of ecotoxicological properties of the chemical</p> <p>Birds: Acute oral LD₅₀ for mallard ducks = 205-245, ring-necked pheasants 620-1000 mg /kg. Fish: Highly toxic (LC₅₀ (96 hours) for golden orfe = 0.002 mg/l water) but , in practical use, should be harmless to wildlife. Daphnia LC₅₀ (48 hours) 75-750 µg/l. Algae EC₅₀ for green algae >0.56 mg/l. Bees: Not toxic to bees under field conditions at an application rate of 1.6 l/ha (560 g endosulfan/ha). Worms: NOEC = 0.1 mg/kg dry weight.</p>

PART II: FINAL REGULATORY ACTION

2.	FINAL REGULATORY ACTION	
2.1	The chemical is: <input type="checkbox"/> banned	OR <input checked="" type="checkbox"/> severely restricted
2.2	Information specific to the final regulatory action	
2.2.1	<p>Summary of the final regulatory action</p> <p>Endosulfan in formulations other than Capsule Suspension (CS) has been prohibited for import, production, having in possession and use as agricultural pesticide.</p>	
2.2.2	<p>Reference to the regulatory document</p> <p>Notification of Ministry of Industry dated 30 September 2004, published in the Royal Gazette volume no 121, special section 118 Ng. dated 18 October 2004.</p>	
2.2.3	<p>Date of entry into force of the final regulatory action</p> <p>19 October 2004.</p>	

2.3	Was the final regulatory action based on a risk or hazard evaluation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	If yes, give information on such evaluation	
	Endosulfan as EC formulation is very highly hazardous to aquatic life.	
	Reference to the relevant documentation	
	The Pesticide Manual. 13 th Edition.	

2.4	Reasons for the final- regulatory action	
2.4.1	Is the reason for the final regulatory action relevant to the human health?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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	
	Reference to the relevant documentation	
	Expected effect of the final regulatory action	

2.4.2	Is the reason for the final regulatory action relevant to the environment?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	<p>If yes, give summary of the known hazards and risks to the environment</p> <p>Endosulfan as EC and GR formulations are very highly toxic to fish and other aquatic lives. They had been registered for use in field crops but they were misused to kill Golden Apple Snail in the paddy field.</p>	
	<p>Reference to the relevant documentation</p> <p>The Pesticide Manual. 13 th Edition.</p>	
	<p>Expected effect of the final regulatory action</p> <p>Reduce misuse of endosulfan. (In the past, farmers used for controlling Golden Apple Snail in paddy field. It did not kill only snail but also killed other aquatic organisms).</p>	

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	<input type="checkbox"/> Industrial
	<p>Use or uses prohibited by the final regulatory action</p>	
	<p>Use or uses that remain allowed</p>	

2.5.2	Final regulatory action has been taken for the chemical category	<input checked="" type="checkbox"/> Pesticide				
<table border="1"> <tr> <td></td> <td>Formulation(s) and use or uses prohibited by the final regulatory action</td> </tr> <tr> <td colspan="2"> <p>Other formulations were prohibited except capsule suspension (CS) formulation.</p> </td> </tr> </table>				Formulation(s) and use or uses prohibited by the final regulatory action	<p>Other formulations were prohibited except capsule suspension (CS) formulation.</p>	
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	Formulation(s) and use or uses that remain allowed					
<p>CS formulation is registered for use in cotton only.</p>						

2.5.3 Estimated quantity of the chemical produced, imported, exported and used, where available.		
	Quantity per year (MT)	Year
Produced		
Imported	1,678.1	2003
Exported		
Used		

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

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

2.7.2	<p>Information on alternatives and their relative risks</p> <p>Endosulfan CS formulation has been proved to be safe for aquatic organisms including golden apple snail. So it cannot be used to control snail.</p>
2.7.3	<p>Relevant additional information</p>

PART III : GOVERNMENT AUTHORITIES

Ministry/Department and authority responsible for issuing/enforcing the final regulatory action	
Institution	Department of Agriculture
Address	50 Phaholyothin Rd., Ladyao, Chatuchak, Bangkok 10900 Thailand
Telephone	66-2-5790586
Telefax	66-2-5615024
E-mail address	
Designated National Authority	
Institution	Department of Agriculture
Address	50 Phaholyothin Rd., Ladyao, Chatuchak, Bangkok 10900 Thailand
Name of person in charge	Mr. Chakarn Saengruksawong
Position of person in charge	Director-General
Telephone	66-2-5790586
Telefax	66-2-5615024
E-mail address	chakarn@doa.go.th

Date, signature of DNA and official seal:

17-01-05

