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PIC CIRCULAR LX (60) – December 2024



ROTTERDAM CONVENTION

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

PIC CIRCULAR LX (60)

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INTRODUCTION

1. THE PURPOSE OF THE PIC CIRCULAR

The Rotterdam Convention on the Prior Informed Consent Procedure (PIC) for Certain Hazardous Chemicals and Pesticides in International Trade entered into force on 24 February 2004.

The purpose of the PIC Circular is to provide all Parties, through their designated national authorities, with the information required in Articles 4, 5, 6, 7, 10, 11, 13 and 14 of the Convention. The decision guidance documents on relevant chemicals dispatched to Parties in line with paragraph 3 of Article 7 are sent out in a separate communication.

The PIC Circular is published every six months, in June and December. The present Circular contains information related to and received during the period from **1 May 2024 to 31 October 2024**. Information received after 31 October 2024 will be included in the next PIC Circular.

Designated national authorities are requested to review the information related to their countries and communicate any inconsistencies, errors or omissions to the Secretariat.

2. IMPLEMENTATION OF THE ROTTERDAM CONVENTION

2.1 Designated national authorities

In line with paragraph 3 of Article 4, Parties shall notify the Secretariat on designations of or changes to designated national authorities. An updated register of designated national authorities as at 31 October 2024 is distributed together with the present PIC Circular. Full and subsequently updated contact details as transmitted by Parties are available on the Convention website.¹

2.2 Notifications of final regulatory action

Parties that have adopted final regulatory actions shall notify the Secretariat within the timeframes established in paragraphs 1 and 2 of Article 5.

Appendix I of the PIC Circular contains a synopsis of all notifications of final regulatory action received from Parties since the last PIC Circular, in line with paragraphs 3 and 4 of Article 5 of the Convention. It contains summaries of notifications of final regulatory action that have been received by the Secretariat and verified to contain the information required by Annex I to the Convention (Part A), information regarding notifications which do not contain all the information (Part B), as well as those notifications that are still under verification by the Secretariat (Part C).

Appendix V contains a list of all the notifications of final regulatory action for chemicals not listed in Annex III, received during the interim PIC procedure and the current PIC procedure (September 1998 to 31 October 2024).

A database of notifications of final regulatory action submitted by Parties, including those for the chemicals listed in Annex III to the Convention, verified as containing the information required by Annex I to the Convention is also available on the Convention website.²

A synopsis of all notifications received under the original PIC procedure, which is before the adoption of the Convention in 1998, was published in **PIC Circular X** in December 1999.³ These notifications however do not meet the requirements of Annex I because the information requirements for notifications under the original PIC procedure were different. Although Parties are not obliged to resubmit

¹ www.pic.int/tabid/3282/Default.aspx.

² www.pic.int/tabid/1368/language/en-US/Default.aspx.

³ www.pic.int/tabid/1168/language/en-US/Default.aspx.

notifications submitted under the original PIC procedure,⁴ they may wish to consider doing so for those chemicals not presently listed in Annex III if sufficient supporting information is available.

To facilitate the submission of notifications, a **form for notification of final regulatory action to ban or severely restrict a chemical** and **instructions on how to complete it** are available on the Convention website.⁵

2.3 Proposals for the listing of severely hazardous pesticide formulations

In line with paragraph 1 of Article 6, any Party that is a developing country or a country with an economy in transition and that is experiencing problems caused by a severely hazardous pesticide formulation under conditions of use in its territory, may propose to the Secretariat the listing of the severely hazardous pesticide formulation in Annex III.

Appendix II of the PIC Circular contains summaries of such proposals, which the Secretariat has verified contain the information required by part 1 of Annex IV to the Convention.

To facilitate the submission of proposals, an **incident report form for human health incidents involving severely hazardous pesticide formulations** and an **incident report form for environmental incidents involving severely hazardous pesticide formulations** are available on the Convention website.⁶

2.4 Chemicals subject to the PIC procedure

Appendix III of the PIC Circular lists all the chemicals that are currently listed in Annex III to the Convention and subject to the PIC procedure, their categories (pesticide, industrial and severely hazardous pesticide formulation) and the date of first communication of the corresponding decision guidance document.

The twelfth meeting of the Conference of the Parties (COP-12) to the Rotterdam Convention will be held from 28 April to 09 May 2025 in Geneva, Switzerland, and will consider the following four chemicals recommended for listing in Annex III to the Convention by the Chemical Review Committee:

Chemical	Relevant CAS number(s)	Category	Decision No.
Methyl-bromide	74-83-9	Pesticide	CRC-18/3
Paraquat	4685-14-7 (paraquat ion) 1910-42-5 (paraquat dichloride) 27041-84-5 (paraquat bistribromide) 2074-50-2 (paraquat bis(methylsulfate))	Pesticide	CRC-18/4
Chlorpyrifos	2921-88-2	Pesticide	CRC-19/3
Mercury	7439-97-6	Industrial	CRC-19/4

At its eleventh meeting, the Conference of the Parties deferred to its twelfth meeting consideration of whether to include in Annex III to the Convention: acetochlor, carbosulfan, chrysotile asbestos, fenthion (ultra-low volume (ULV) formulations at or above 640 g active ingredient/L), iprodione and liquid formulations (emulsifiable concentrate and soluble concentrate) containing paraquat dichloride at or above 276 g/L, corresponding to paraquat ion at or above 200 g/L. Further information on these

⁴ FAO & UNEP, 2019. Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. Article 5, paragraph 2. Rome and Geneva.

⁵ www.pic.int/tabid/1182/language/en-US/Default.aspx.

⁶ www.pic.int/tabid/1192/language/en-US/Default.aspx.

chemicals can be found on the Rotterdam Convention website, in the section “Chemicals recommended for listing” under “The Convention” tab.⁷

2.5 Information exchange on exports and export notifications

Article 12 and Annex V to the Convention set out the provisions and information requirements related to export notifications. When a chemical that is banned or severely restricted by a Party is exported from its territory, that Party shall provide an export notification to the importing Party, which shall include the information in Annex V. The importing Party has the obligation to acknowledge receipt of the first export notification received after the adoption of the final regulatory action.

To assist Parties in meeting their obligations under the Convention, a **standard form for export notification** and **instructions on how to complete it** are available on the Convention website.⁸

The Conference of the Parties, at its eleventh meeting, in its decision RC-11/1, encouraged Parties to provide information on their implementation of Articles 11, 12, 13 and 14 of the Convention by submitting responses to the periodic questionnaire on the implementation of those articles. The same decision requested the Secretariat, subject to the availability of resources, to continue implementing the provisions of decisions RC-7/2 on Proposals on ways of exchanging information on exports and export notifications and RC-9/1 on Status of implementation of the Convention.

2.6 Information to accompany exported chemicals

In response to paragraph 1 of Article 13, the World Customs Organization has assigned specific Harmonized System customs codes to the individual chemicals or groups of chemicals listed in Annex III to the Convention. A table containing the Harmonized System codes assigned by the World Customs Organization is available on the Convention website.⁹

If a Harmonized System customs code has been assigned to a chemical listed in Annex III, Parties shall require that the shipping document carries this assigned code when the chemical is exported.

2.7 Information on responses concerning import of chemicals listed in Annex III to the Convention

In accordance with paragraphs 2 and 4 of Article 10, each Party shall transmit to the Secretariat, as soon as possible, and in any event no later than nine months after the date of dispatch of the decision guidance document, a response concerning the future import of the chemical concerned. If a Party modifies this response, the Party shall forthwith submit the revised response to the Secretariat. The response shall consist of either a final decision or an interim response.

Paragraph 7 of Article 10 provides that, each Party shall, no later than the date of entry into force of the Convention for that Party, transmit to the Secretariat import responses with respect to each chemical listed in Annex III to the Convention.

Appendix IV includes an overview of import responses received since the last PIC Circular. All import responses received, including a description of the legislative or administrative measures on which the decisions have been based, are available on the Convention website.¹⁰ Information on any cases of failure to transmit a response is also available.

As at 31 October 2024, the following Parties have submitted import responses for all 55 chemicals listed in Annex III to the Convention: Australia, Cabo Verde, Canada, Cambodia, China, European Union (on behalf of its 27 Member States), Eswatini, Japan, New Zealand, North Macedonia, Norway, Oman,

⁷ <http://www.pic.int/tabid/1185/language/en-US/Default.aspx>.

⁸ www.pic.int/tabid/1365/language/en-US/Default.aspx.

⁹ www.pic.int/tabid/1159/language/en-US/Default.aspx.

¹⁰ www.pic.int/tabid/1370/language/en-US/Default.aspx.

Qatar, Russian Federation, Serbia, Singapore, South Africa, Switzerland, Thailand, Türkiye and United Kingdom of Great Britain and Northern Ireland. 118 Parties have not yet provided import responses for one or more of the chemicals listed in Annex III to the Convention. Of these, the following seven (7) Parties have failed to provide any import responses: Afghanistan, Djibouti, Grenada, Marshall Islands, Saint Vincent and the Grenadines, Sierra Leone and Somalia.

To facilitate the submission of responses regarding import, a **form for import response and instructions on how to complete it** are available on the Convention website.¹¹

Import responses must be submitted through the official channel of communication for the Party. The date of issue and signature of the DNA is to be provided for each individual form.¹²

2.8 Information on chemicals for which the Conference of the Parties has yet to take a final decision

The Conference of the Parties, in its decisions RC-3/3, RC-4/4, RC-6/8, RC-8/6, RC-8/7 and RC-9/5 encouraged Parties to make use of all information available on the following chemicals, to assist others, in particular developing countries and countries with economies in transition, to make informed decisions regarding their import and management and to inform other Parties of those decisions using the information exchange provisions in Article 14: acetochlor; carbosulfan; chrysotile asbestos; fenthion (ultra-low volume (ULV) formulations at or above 640 g active ingredient/L); and liquid formulations (emulsifiable concentrate and soluble concentrate) containing paraquat dichloride at or above 276 g/L, corresponding to paraquat ion at or above 200 g/L.

In line with these decisions and paragraph 1 of Article 14, **Appendix VI** of the PIC Circular contains information on chemicals recommended by the Chemical Review Committee for listing in Annex III but for which the Conference of the Parties has yet to take a final decision.

2.9 Information on transit movements

As outlined in paragraph 5 of Article 14, any Party requiring information on transit movements through its territory of chemicals listed in Annex III may report its need to the Secretariat, which shall inform all Parties accordingly.

Since the last PIC Circular, no Party has reported to the Secretariat its need for information on transit movements through its territory of Annex III chemicals.

3. ADDITIONAL INFORMATION

3.1 Information on the status of ratification of the Rotterdam Convention

As at 31 October 2024 there were 166 Parties to the Rotterdam Convention.¹³ Belarus is the latest Party to accede to the Convention, which entered into force for it on 9 June 2024. Information on new Parties after 31 October 2024 will be reported in the next PIC Circular.

3.2 Documents relevant to the implementation of the Rotterdam Convention

The following documents relevant to the implementation of the Convention are available on the Convention website:¹⁴

¹¹ www.pic.int/tabid/1165/language/en-US/Default.aspx.

¹² www.pic.int/tabid/1165/language/en-US/Default.aspx.

¹³ www.pic.int/tabid/1072/language/en-US/Default.aspx.

¹⁴ www.pic.int.

- Text of the Convention – Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (*Arabic, Chinese, English, French, Russian, Spanish*);¹⁵
- Decision guidance documents for each of the chemicals listed in Annex III to the Convention (*English, French, Spanish*);¹⁶
- Form and instructions for notification of final regulatory action to ban or severely restrict a chemical (*English, French, Spanish*);⁵
- Form and instructions for import responses (*English, French, Spanish*);¹¹
- Form and instructions for reporting human health incidents and environmental incidents relating to severely hazardous pesticide formulations (*English, French, Spanish*);⁶
- Export notification form and instructions (*English, French, Spanish*);⁷
- Form for notification of designation of contacts (*English, French, Spanish*);¹⁷
- All PIC Circulars (*English, French, Spanish*);³
- Database of designated national authorities and official contact points for the Rotterdam Convention (*English*).¹

3.3 Resource Kit of information on the Rotterdam Convention

The Resource Kit¹⁸ is a collection of publications containing information on the Rotterdam Convention. It has been developed with a range of end-users in mind, including the public, designated national authorities and stakeholders involved in the implementation of the Convention. It includes elements to assist in awareness-raising activities and detailed technical information and training materials aimed at facilitating implementation of the Convention.

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¹⁵ www.pic.int/tabid/1048/language/en-US/Default.aspx.

¹⁶ www.pic.int/tabid/2413/language/en-US/Default.aspx.

¹⁷ www.pic.int/tabid/3285/language/en-US/Default.aspx.

¹⁸ www.pic.int/tabid/1064/language/en-US/Default.aspx.

APPENDIX I**SYNOPSIS OF NOTIFICATIONS OF FINAL REGULATORY ACTION
RECEIVED SINCE THE LAST PIC CIRCULAR**

This appendix consists of three parts:

Part A: Summary of notifications of final regulatory action that have been verified as containing all the information required by Annex I to the Convention

Notifications of final regulatory action that have been verified as containing all the information required in Annex I to the Convention, received between 1 May 2024 to 31 October 2024.

Part B: Notifications of final regulatory action that have been verified as not containing all the information required by Annex I to the Convention

Notifications of final regulatory action that have been verified as not containing all the information required by Annex I to the Convention, received between 1 May 2024 to 31 October 2024.

Part C: Notifications of final regulatory action still under verification

Notifications of final regulatory action that have been received by the Secretariat for which the verification process has not yet been completed.

The information is also available on the Convention website.¹⁹

¹⁹ www.pic.int/tabid/1368/language/en-US/Default.aspx.

Synopsis of notifications of final regulatory action received since the last PIC Circular

PART A

**SUMMARY OF NOTIFICATIONS OF FINAL REGULATORY ACTION THAT
HAVE BEEN VERIFIED AS CONTAINING ALL THE INFORMATION REQUIRED
BY ANNEX I TO THE CONVENTION**

BRAZIL

Common Name(s): Methyl parathion **CAS number(s):** 298-00-0

Chemical Name: *O,O*-Dimethyl *O*-(4-nitrophenyl) phosphorothioate

Final regulatory action has been taken for the category: Pesticide

Final regulatory action: The chemical is banned.

Summary of the final regulatory action: Prohibition of all technical and formulated products based on methyl parathion active ingredient. So, the production, use, trade, import and export of methyl parathion had been banned.

Use or uses prohibited by the final regulatory action: All uses.

The final regulatory action was based on a risk or hazard evaluation: Yes

The reasons for the final regulatory action were relevant to: Human health

Summary of known hazards and risks to human health: In 2008, the Brazilian Health Regulatory Agency (Anvisa) initiated the toxicological reassessment of Methyl Parathion due to evidences of high acute toxicity, neurotoxicity, endocrine disruption, mutagenicity and carcinogenicity of this active ingredient of pesticides.

Brazilian law predicts that pesticides may have their registrations cancelled in the country when they fall under the following conditions related to human health: when they have no antidote or effective treatment in Brazil; if found teratogenic, mutagenic or carcinogenic; if they cause hormonal disturbances and damage to the reproductive system or if they are more dangerous to humans than demonstrated in tests with laboratory animals.

Methyl parathion is classified by the World Health Organization as extremely neurotoxic, causing behavioral changes, respiratory depression, respiratory paralysis, coma, death, intermediate syndrome and delayed polyneuropathy (WHO, 1992).

Considering the technical note of Fiocruz, the contributions from the registrant in the public consultation, the international regulatory situation and the scientific literature, Anvisa concluded Methyl Parathion is extremely neurotoxic, with evidence of compromising neurobehavioral development, proving to be more dangerous to man than laboratory tests on animals have been able to demonstrate (Crowder et al., 1980; Gupta et al., 1985; Kumar e Devi, 1992; Kumar and Devi, 1996; Ruckart et al., 2004; Slotkin et al., 2008; Eells e Brown, 2009; Johnson et al., 2009; Slotkin et al., 2009; Levin et al., 2010; Adigun et al., 2010a; Adigun et al., 2010b; Lassiter et al., 2010). Potential mutagenesis (Mahli and Grover, 1987; Mathew et al., 1990; Vijayaraghava and Nagarajan, 1994; Nehez et al., 1994) and reproductive toxicity (Ogi e Hamada, 1965; Bell et al., 2001; Kumar, 2004; Woodruff et al., 2008; Yucra et al., 2008) were also confirmed.

In addition to the hazard assessment, the characterization of the exposure in Brazil shows potential risks to the population. According to data from the Brazilian Program on Pesticide Residue Analysis in Food, between 2009 and 2013 Methyl parathion residues were observed in unauthorized cultures (kale, apple, orange, and strawberry) or above the maximum allowed limits.

Therefore, from the reevaluation of the health effects of Methyl Parathion, completed in 2015, ANVISA concluded this active ingredient of pesticides is mutagenic, causes damage to the reproductive system and is more toxic to humans than demonstrated in tests with laboratory animals, which are prohibitive criteria for registration of pesticides in Brazil. Therefore, Methyl Parathion was completely banned in Brazil in 2016.

Expected effect of the final regulatory action in relation to human health: Eliminate health risks posed by Methyl parathion.

Information on alternatives and their relative risks, e.g. IPM, chemical and non-chemical alternatives: With the exception of the bean crop (peanut aphid - *Caliotrips brasiliensis*), which has only one acephate-based product registered as an alternative control, all other biological targets of all crops (cotton, garlic, onion, potato, corn, soybeans and wheat) that were controlled by methyl parathion have several chemical alternatives registered: acephate, carbosulfan, methomyl, imidacloprid, bifenthrin, triflumuron, thymethoxam, thiamethoxam, chlorfenapyr, alpha-cypermethrin, beta-cypermethrin, lambda-cyhalothrin, thiacloprid, chlorantraniliprole, chlorpyrifos, lufenuron. As alternatives of biological control there are the Baculovirus and *Bacillus thuringiensis*.

Date of entry into force of the final regulatory action: 14/12/2015

BRAZIL

Common Name(s): Prochloraz **CAS number(s):** 67747-09-5

Chemical Name: *N*-Propyl-*N*-[2-(2,4,6-trichlorophenoxy)ethyl]imidazole-1-carboxamide

Final regulatory action has been taken for the category: Pesticide.

Final regulatory action: The chemical is banned.

Summary of the final regulatory action: Prohibition of all technical and formulated products based on prochloraz active ingredient.

Use or uses prohibited by the final regulatory action: All uses.

Use or uses that remain allowed: None.

The final regulatory action was based on a risk or hazard evaluation: Yes

The reasons for the final regulatory action were relevant to: Human health

Summary of known hazards and risks to human health: Prochloraz is a non-systemic fungicide that was used in Brazil for foliar application on onion, carrots, barley, watermelon, rose, tomato and wheat and for post-harvest application on papaya and mango. There were three authorized formulations with prochloraz in Brazil: Sportak 450 EC, Mirage 450 EC and Jade. In 2013 Brazilian Health Regulatory Agency (ANVISA) initiated the toxicological reassessment of prochloraz due to a court order that suspected of its potential carcinogenic, teratogenic and endocrine-disrupting effects.

Brazilian law predicts that pesticides may have their registrations cancelled in the country when they fall under the following conditions related to human health: when they have no antidote or effective treatment in Brazil; if found teratogenic, mutagenic or carcinogenic; if they cause hormonal disturbances and damage to the reproductive system or if they are more dangerous to humans than demonstrated in tests with laboratory animals.

Hazard assessment

After analyzing studies performed by registrants and from the peer-reviewed scientific literature, ANVISA concluded prochloraz interferes with the androgen signaling pathway by at least two mechanisms: androgen receptor antagonism and inhibition of steroidogenesis. When only classical parameters of toxicological studies (weight of sexual organs) are considered, the antiandrogenic effects of prochloraz are observed only at high doses. However, after a more detailed analysis of some recent peer-reviewed articles (Noriega et al., 2005; Vinggaard et al, 2005a; Laier et al, 2006; Blystone et al, 2007a; Blystone et al, 2007b), it can be evidenced that other endocrine-mediated effects, more sensitive to an antiandrogenic mode of action, appear in doses well below the ones that cause changes in the weight of androgen-dependent organs.

Physically observable effects of developmental exposure to prochloraz, as nipple retention, were observed at 30 mg/kg/day (Noriega et al., 2005; Vinggaard et al, 2005a), a dose about two times higher than the NOAEL from the rat Study of Two Generations (♂ : 13-16 mg/kg, ♀ : 14-18 mg/kg) conducted by registrant companies (Cozens et al., 1982). Moreover, Blystone et al (2007a), who evaluated

hormonal levels after pubertal exposure (PND 23-42/43) of rats to prochloraz, have already observed a significant reduction of testicular androstenedione at 7.8 mg/kg; and a significant decrease in serum and testicular testosterone, with a consequent increase in testicular 17 α hydroxiprogesterone, at 15.6 mg/kg. Another study by Blystone et al. (2007b) evaluated hormonal levels following exposure of rats during the fetal period of differentiation of androgen-dependent tissues (GD 14-18) and found hormonal changes at 7.8 mg/kg, the lower dose tested (significant increase in progesterone and in testicular 17 α hydroxyprogesterone). Therefore, Blystone and colleagues (2007a, 2007b) have shown hormonal changes in doses approximately four times lower than those known to cause morphological changes resulting from the antiandrogenic action of prochloraz. It is worth mentioning that these studies, which evaluated hormonal levels, cover only a short developmental period of the animals, since they aim to determine the prochloraz mode of action. Thus, it can be expected that longer exposure periods would lead to even more pronounced hormonal changes or that they could be evidenced in even lower doses.

Although at the time of the evaluation, there was still no worldwide consensus on criteria to identify and evaluate the activity of endocrine disruptors (ECETOC, 2011), it was considered that there were three important uncertain aspects of substances with these types of effects, which need to be clarified (EFSA, 2013): (a) exposure to certain substances during critical periods of development can result in irreversible changes in organs/tissues; (B) exposure to multiple substances with endocrine effects can lead to combined toxicity; and (c) there is no consensus in the scientific community about the existence and/or relevance of effects at low doses and non-monotonic dose-response curves in Toxicology.

ANVISA believes that there is no guarantee that the doses of prochloraz in which endocrine-mediated adverse effects could be observed are not relevant to humans and cannot be achieved in real conditions of use. There are no detailed toxicokinetic data, combined with biomonitoring data on exposed populations, which can provide this information. However, even if such data were available, there is a general uncertainty in the scientific community on the existence of thresholds for endocrine-disrupting effects and on the differences of susceptibility between species during developmental key stages, particularly in cases involving relevant endocrine endpoints to humans, such as those affected by prochloraz.

ANVISA therefore concluded that prochloraz causes hormonal disturbances and damages in the reproductive system, at doses that cannot be regarded as irrelevant to humans. Furthermore, exposure to prochloraz during critical developmental periods of animals leads to particularly adverse irreversible effects, even upon discontinuation of administration of the substance. Additionally, the uncertainties about the possible synergistic effect of mixtures of substances in the environment with similar modes of action lead to regulatory concerns.

Risk assessment

From 2009 to 2014 prochloraz was monitored by the Brazilian Program on Pesticide Residue Analysis in Food (PARA) in 9,212 samples, distributed in 21 crops. During this period, residues of prochloraz were detected in 11 cultures (pineapple, lettuce, rice, cabbage, orange, strawberry, cucumber, grape, papaya, mango and tomato), despite having authorized use for only 3 of them (papaya, tomato and mango). Papaya samples had the largest number of detections of prochloraz (157, ie 15.8% of analysed samples), and even with this crop having a high maximum residue level (1 mg/kg), 10 samples exceeded this limit. 8.5% of strawberry samples had prochloraz residues, not authorized for this crop. Anvisa performed the risk assessment from acute dietary exposure for each sample in which prochloraz was detected from 2009 to 2014, considering the Acute Reference Dose (ARfD) of 0.025 mg/kg recommended by EFSA. For the calculation of residue intake, there were used food consumption data and the average body weight of consumers of each crop, extracted from the Brazilian Family Budget Survey (POF / IBGE 2008-2009). 16 samples showed concentrations of prochloraz above the ARfD (13 of papaya, 1 of citrus, 1 of pineapple and 1 of mango).

Conclusions

Therefore, from the reevaluation of the health effects of prochloraz, completed in 2016, ANVISA concluded this active ingredient of pesticides causes hormonal disturbances and damage to the reproductive system, which are prohibitive criteria for registration of pesticides in Brazil. Additionally, the risk assessment carried out by ANVISA with prochloraz monitoring data on food showed risks resulting from acute exposure to this active ingredient. Thus, prochloraz was banned in Brazil in 2016.

Expected effect of the final regulatory action in relation to human health: Eliminate the risks posed by prochloraz.

Information on alternatives and their relative risks, e.g. IPM, chemical and non-chemical alternatives: With the exception of postharvest treatment in the papaya crop for the control of postharvest rot (*Rhizopus stolonifer*) that has no registered alternative (thus leaving no product registered for its control), all other diseases in the four crops (onion, papaya, mango and rose) have several chemical control alternatives registered: chlorothalonil, fluazinam, mancozeb, azoxystrobin, tebuconazole, piraclostrobin, copper oxychloride, tetraconazole, cymoxanil, iprodione, boscalide, diphenconazole, imazalil, flutriafol, methyl thiophanate, thiabendazole, fluxapiroxate. As alternatives of biological control there is the *Bacillus pumilis* for the control of the purple spot (*Alternaria porri*) in the onion culture.

Date of entry into force of the final regulatory action: 04/02/2016

CAMEROON

Common Name(s): Lead chromates	CAS number(s):	12656-85-8, 1344-37-2, 7758- 97-6
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Chemical Name: Dioxido(dioxo)chromium;lead(2+)

Final regulatory action has been taken for the category: Industrial

Final regulatory action: The chemical is severely restricted

Summary of the final regulatory action: On 21 September 2017, the Ministry of Environment, Nature Protection and Sustainable Development (MINEPDED) promulgated Order No 004, modifying and supplementing the list of chemical substances in Decree No. 2011/2581/PM of August 23, 2011, regulating harmful and/or dangerous chemical substances.

Use or uses prohibited by the final regulatory action: Order No 004 effectively prohibits the use of lead chromates as intentional ingredients in paints, and it effectively prohibits the import and manufacture of paints that contain lead chromates as intentional ingredients (as pigments). Order No 004 does not prohibit or restrict any other uses of lead chromates.

Use or uses that remain allowed: Any other use of lead chromates, other than those related to their use as ingredients in paints and coatings, remain allowed. However, based on a review of import data, current national usage of lead chromates, are estimated to be minor.

The final regulatory action was based on a risk or hazard evaluation: Yes

Order No 004 added "Paint formulations with a concentration of Lead compounds greater than 90 ppm" to the "List of harmful and/or dangerous chemical products and substances prohibited from manufacturing and importing."

Order No 004 also added "Paint formulations with a concentration of Lead compounds equal to or greater than 90 ppm" to the List of harmful and/or dangerous chemical products and substances subject to prior authorization.

This Regulatory Action severely restricted the use of lead chromates.

Whenever lead chromates are intentionally used as pigments in paints, the concentration of lead compounds in the paint product will, almost always, be substantially greater than 1,000 ppm (typically above 10,000 ppm). Order No 004 prohibits the manufacture and import of paints with a concentration of lead compounds greater than 90 ppm. This limit mirrors the limit adopted by the United States and other countries. Its intent is to effectively ban the intentional use of any lead compound as an ingredient in paint, including lead chromates, while permitting the possibility of some, unintentional, de minimis, lead contamination. Order No 004, therefore, effectively prohibits the use of lead chromates as intentional ingredients in paints.

See e.g. Toolkit for establishing laws to eliminate lead paint, Paint Basics, Module A-3; Page 14, 2021 Update, Global Alliance to Eliminate Lead Paint,

<https://wedocs.unep.org/bitstream/handle/20.500.11822/37030/PAINT.pdf?sequence=3&isAllowed=y>

The reasons for the final regulatory action were relevant to: Human health

Summary of known hazards and risks to human health: The report: *How Cameroon Decided to Ban Lead Paint*.

As noted above, a detailed description of Cameroon’s risk evaluation, including background information and references to the studies, findings, and other country experiences that the risk evaluation relied upon can be found in the report: *How Cameroon Decided to Ban Lead Paint*, which is being submitted together with this Notification.

Cameroon’s decision to ban lead paints imposed a severe restriction on lead chromates. When the United States and other countries adopted legally binding limits on the lead content of paint, they did so because of the adverse health effects that are caused by from human exposures to lead from paints that contain lead pigments and/or other leaded ingredients.

The U.S.’s first ban on lead paints for home use was based on a 1976 risk evaluation prepared by a committee of the U.S. National Academy of Sciences titled *Recommendations for the Prevention of Lead Poisoning in Children*. (<https://nap.nationalacademies.org/download/18520>)

The U.S.’ 1976 risk evaluation

- Used the term “lead additives” to include lead chromate pigments and the lead compounds used as paint ingredients called driers.
- Proposed a regulatory limit of 600 ppm (.06%) lead “to allow for trace amounts of lead present in the raw materials, for possible contamination during processing, and for limits of precision in the analytical methods of determining the lead content of paints,” and
- Concluded that “Since paints without lead additives may contain up to 0.03 percent lead, a level of 0.06 percent lead provides reasonable latitude for regulatory purposes.”

The U.S. 1977 decision to impose a 600 ppm limit on the total lead content of paints was designed to prevent the use of lead compounds (including lead chromates) as intentional ingredients in paints. Cameroon’s decision to impose a 90 ppm limit reflects current recommendations based on the wider availability of cleaner raw materials and more precise analytical methods.

If a 600 ppm regulatory limit was sufficient for the U.S. to prevent the intentional use of lead chromate pigments in paints sold and used in that country in 1978, a 90 ppm regulatory limit was more than sufficient to prevent the intentional use of lead chromate pigments in paints sold and used in Cameroon after 2017.

Evidence of health effects in children of “low-level” Lead Exposures

Young children, especially those under six years of age, are particularly vulnerable to lead exposure and lead exposure can cause adverse, irreversible lifelong effects. Even low-level exposures to lead can interfere with a child’s brain development and cause neurological disorders or deficits. These lead to a reduction in the child’s intelligence, learning ability and school performance, and lifelong earnings; and it can also cause increased anti-social behavior and incarceration rates. Exposure to lead early in life can alter gene expression and cause an associated increased risk of disease later in life. There is no level of exposure to lead in children that is known to be without harmful effects.

Key references (including references therein):

The Joint FAO/WHO Expert Committee on Food Additives (JECFA), *Lead (addendum)*, approved by the Seventy-third meeting, held in Geneva, from 8 to 17 June 2010 (pages 381-497) https://iris.who.int/bitstream/handle/10665/44521/9789241660648_eng.pdf?sequence=1

World Health Organization. (2010). *Childhood lead poisoning*. https://iris.who.int/bitstream/handle/10665/136571/9789241500333_eng.pdf?sequence=1

Lanphear, B. P., Hornung, R., Khoury, J., Yolton, K., Baghurst, P., Bellinger, D. C., ... & Roberts, R. (2005). *Low-level environmental lead exposure and children’s intellectual function: an international pooled analysis*. *Environmental health perspectives*, 113(7), 894-899. <https://ehp.niehs.nih.gov/doi/full/10.1289/ehp.7688>

Jusko, T. A., Henderson Jr, C. R., Lanphear, B. P., Cory-Slechta, D. A., Parsons, P. J., & Canfield, R. L. (2008). *Blood lead concentrations < 10 µg/dL and child intelligence at 6 years of age*. *Environmental health perspectives*, 116(2), 243-248.
<https://ehp.niehs.nih.gov/doi/full/10.1289/ehp.10424>

Bellinger, D. C. (2008). *Very low lead exposures and children's neurodevelopment*. *Current opinion in pediatrics*, 20(2), 172-177.
https://journals.lww.com/copeditrics/abstract/2008/04000/very_low_lead_exposures_and_children_s.13.aspx

U.S. Department Of Health And Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry (2007). *Toxicological profile for lead*.
<https://semspub.epa.gov/work/05/930045.pdf>

Gilbert, S. G., & Weiss, B. (2006). *A rationale for lowering the blood lead action level from 10 to 2 µg/dL*. *Neurotoxicology*, 27(5), 693-701.
<https://www.sciencedirect.com/science/article/abs/pii/S0161813X06001690>

Evidence of acute and chronic toxicity of lead

Lead is known to cause a wide range of health impacts in both children and adults. At high levels of exposure, lead can severely damage the brain and kidneys in adults or children and ultimately cause death. Other health impacts in children include colic, constipation, anaemia, and depression of the central nervous system that may result in coma, convulsions and death. Additional health impacts in adults include adverse hematological effects such as anemia, altered thyroid hormone levels, weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people. In pregnant women, high levels of exposure to lead may cause miscarriage. High-level exposure in men can damage the organs responsible for sperm production.

Key references (including references therein):

World Health Organization. (2010). *Childhood lead poisoning*.
https://iris.who.int/bitstream/handle/10665/136571/9789241500333_eng.pdf?sequence=1

U.S. Department Of Health And Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry (2007). *Toxicological profile for lead*.
<https://semspub.epa.gov/work/05/930045.pdf>

Toxicological Information.

Cameroon's evaluation of the health risk from exposure to lead from lead paint considered information about lead's toxicity including:

- Children under 6 years of age, and pregnant women are especially vulnerable to lead exposure.
- There is no known threshold of lead exposure in young children beneath which neurological deficits do not occur.
- Exposure to even small amounts of lead can damage a young child's developing brain and cause life-long, irreversible neurological impairments or deficits.
- Cohort studies have found that the neurological impairments or deficits that result from lead exposure can cause reduced intelligence (as measured by IQ test); reduced school performance (as measured by school grades and graduation rates); increased anti-social behaviour (as measured by incarceration rates); and reduced socioeconomic attainment (as measured by lifelong earnings).
- When a significant number of a country's young children are exposed to lead (as measured by elevated blood lead levels) this results in a cumulative health effect which harms a country's economic performance as a consequence of reduction in population's IQ.

Evidence of children's exposure to lead from lead paint

Lead paint is a significant source of exposure to lead for children. Painted surfaces weather, wear, and deteriorate over time. When a surface coated with lead paint deteriorates, leadcontaminated dust and paint fragments will be released and enter the nearby indoor and/or outdoor environment. Preparing

surfaces coated with lead paint prior to repainting can cause a high risk of exposure. Prior to repainting old painted surfaces, painters often sand or scrape the surface. This releases a high amount of lead dust and paint fragments into the surrounding environment.

When a young child plays on the floor (or near ledges) in a home where household dust is contaminated with leaded paint fragments, or when a young child plays outdoors in an area where the soil is contaminated with leaded paint fragments, the child is likely to get some of this contaminated dust or dirt on her or his hands.

Children engage in normal hand-to-mouth behavior such as sucking on their hands; eating dust and dirt; putting small objects in their mouths; and/or chewing on a surface. If the dirt on their hands is contaminated with fragments of old lead paint; or if they put a fragment of old lead paint directly into their mouth; or if they chew on a surface coated with old lead paint, they will ingest fragments of old lead paint. And this can happen repeatedly.

The lead in the old paint fragments can be absorbed from the child's gastrointestinal tract and enter their bodily tissues. Gastrointestinal absorption of lead is enhanced in childhood. Up to 50% of ingested lead is absorbed by children, as compared with 10% in adults. Children are also more likely to have nutritional deficiencies that result in increased absorption of lead.

Key references (including references therein):

U.S. Department Of Health And Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry (2007). *Toxicological profile for lead*. <https://semspub.epa.gov/work/05/930045.pdf>

World Health Organization. (2010). *Childhood lead poisoning*. https://iris.who.int/bitstream/handle/10665/136571/9789241500333_eng.pdf?sequence=1

Gaitens, J. M., Dixon, S. L., Jacobs, D. E., Nagaraja, J., Strauss, W., Wilson, J. W., & Ashley, P. J. (2009). *Exposure of US children to residential dust lead, 1999–2004: I. Housing and demographic factors*. *Environmental Health Perspectives*, 117(3), 461-467. <https://ehp.niehs.nih.gov/doi/epdf/10.1289/ehp.11917>

Evidence of exposure to lead from paint in adults, including workers

Adults can also be exposed to lead from paint in home environments. In addition, workers can be exposed to lead from lead paint during various stages of its life cycle. A worker, for example, may be exposed to lead during the manufacture of lead paints, or may be exposed from inhalation during spray-painting with lead paints. Workers are also often exposed to lead from lead paint when preparing to repaint an old surface that was previously coated with lead paint, either in a residential or industrial setting.

Blando, J. D., Antoine, N., & Lefkowitz, D. (2013). *Lead-based paint awareness, work practices, and compliance during residential construction and renovation*. *Journal of environmental health*, 75(9), 20-27. <https://www.jstor.org/stable/26329621>

Virji, M. A., Woskie, S. R., & Pepper, L. D. (2008). *Task-based lead exposures and work site characteristics of bridge surface preparation and painting contractors*. *Journal of occupational and environmental hygiene*, 6(2), 99-112. <https://pubmed.ncbi.nlm.nih.gov/19065390/>

The Potential for future lead exposure in a substantial number of Cameroon's young children.

The risk evaluation considered the U.S. experience in reaching its conclusion that the continued, widespread sale and use of lead paints in Cameroon would result – in later years – in substantial numbers of Cameroon's young children being exposed to lead from lead paints.

As is discussed in the attached report, *How Cameroon Decided to Ban Lead Paint*, data contained in the U.S. 2011 *American Health Homes Survey* provides good evidence that the U.S.' experience of children's ongoing exposures to lead from lead paints can be adapted to prevailing conditions in Cameroon and used to demonstrate this.

Socioeconomic Considerations

The evaluation noted that good, cost-effective substitutes for all leaded paint ingredients are available. It also noted that in the countries that recently banned lead paints, the end-users experienced very little, if any, increase in the cost of the reformulated paints.

Conclusions

The conclusions that were drawn from the evaluation include:

- For the purposes of the risk evaluation, lead should be considered a significant nonthreshold toxicant in young children because:
 - There is no known threshold of lead exposure in young children beneath which neurological deficits do not occur,
 - Even low dose exposures to lead can cause significant lifelong harm to a child's health and well-being, and
 - Widespread lead exposures in a country's population of young children not only causes harm to the individual child and their family, it is also harmful to the country, as a whole, and to its national economy.
- Governments should, therefore, control and prevent widespread sources of lead exposure in children, whenever it is practically and socioeconomically feasible to do so.
- So long as lead paints remain widely available for sale and use in the country, the potential for lead exposures in large numbers of the country's young children will continue to grow (as more and more surfaces in and around homes and schools continue being coated with lead paint.)

And more specifically,

- Regulatory action to control the lead content of paints is justified and necessary to protect the country's human health, especially the health of its children, from exposure to lead from lead paint: an easily avoidable source of lead exposure.

Regulatory Action

Based on the risk evaluation, the Ministry of Public Health concluded that a ban on lead paints can be achieved at a very low socioeconomic cost, and that no sector of Cameroon's society will suffer meaningful harm.

The Ministry conveyed this conclusion to the Environment Ministry, the Industry Ministry, the President of the National Assembly, and the President of the Republic.

Following consultations between the relevant Ministries (Health, Environment, Industry and Trade); the National Standard Agency (ANOR), the Presidents of the National Assembly and the Presidency of the Republic, it was agreed that there was an urgent need to enact a regulatory measure.

The Environment Ministry, based on its mandate, promulgated Order No 004 which bans lead paint by limiting the concentration of lead to no more than 90 ppm in all paints manufactured, imported, marketed, and used in Cameroon.

Expected effect of the final regulatory action in relation to human health: The expected effect of the final regulatory action is reduced risk to human health, by the avoidance of the human exposures to lead from the lead paints that would, otherwise, continue if lead paints were allowed to be sold and used.

Most of the expected beneficial effects will not occur immediately. There is usually a delay of several years between the time a surface is coated with lead paint and the time that fragments of that lead paint accumulate in the surrounding dust and soil, or otherwise become available for ingestion by young children.

Information on alternatives and their relative risks, e.g. IPM, chemical and non-chemical alternatives: Alternatives to lead chromates that were available at the time of the Order, as well as the currently available alternatives includes:

Inorganic Pigments:

- PY 184 – Bismuth Vanadate,

- PY 53 & PBr 24 – both Mixed Metal Oxides, and
- PY 42 & PR 101 – both Iron Oxides.

Organic Pigments:

- PO 13, PO 34, PY 14, & PY 83 – Azo Diarylides,
- PO 16 – Azo Dianisidine,
- PO 36, PY 151, PY 154, & PY 194 – Azo Benzimidazolones,
- PY 65, PY 74, & PY 97 – Monoazo, and
- PO 67, PO 73, PY 110, PY 138, PY 189, and PR 254 – Others

References:

Clariant (2013). Environmental Friendly Coloration – Lead Free Pigment. https://www.saicm.org/portals/12/Documents/GEF-Project/Jakarta-WS/03_Clariant_IPEN.pdf

International Pollutants Elimination Network (2015). Replacement of lead pigments in solvent based decorative paints, Gothenburg, Sweden.

<https://ipen.org/sites/default/files/documents/Replacement%20of%20lead%20pigments%20in%20solvent%20based%20decorative%20paints.pdf>

International Pollutants Elimination Network (2015). Lead drier replacement in solvent based alkyd decorative paints, Gothenburg, Sweden.

<https://ipen.org/sites/default/files/documents/Lead%20drier%20replacement%20in%20solvent%20based%20alkyd%20decorative%20paints.pdf>

United Nations Environment Programme (2022). Lead Paint Reformulation

Technical Guidelines, Geneva, Switzerland.

<https://www.unep.org/resources/toolkits-manuals-and-guides/lead-paint-reformulation-technical-guidelines>

These guidelines were developed “to support the SME paint reformulation by providing guidance for lead paint reformulation and by showcasing some examples of lead paint reformulation in selected SMEs. They discuss the substitution process and how to identify and assess possible, non-lead alternatives, including how to assess their hazards and risks for human health and the environment.

The hazard of the alternatives are in general much lower than of lead chromates, with several alternatives not posing any hazard to human health or the environment.

Additional Information related to the chemical or the final regulatory action, if any:**Production and use of lead chromate-based pigments**

Lead chromate occurs naturally in a mineral called crocoite. Crocoite is rare and costly. It is bought and sold by mineral traders and collectors, but it has no commercial uses other than as a collectors’ item. Commercial-scale production of Lead Chromates did not become possible until the 1820s when accessible deposits of chromite (an ore containing FeCr₂O₄) were first discovered.

REF: Morrison, R. D., & Murphy, B. L. (2010). Environmental forensics: contaminant specific guide. Elsevier. <https://www.sciencedirect.com/book/9780125077514/environmental-forensics>

During the final quarter of the 20th century, high-income countries in North America, Western Europe, and other regions started adopting national regulatory controls to limit the lead content of paints. These regulatory decisions were driven by growing understanding and concerns about lead in paints and about the harms to human health that occur when children, workers, and others are exposed to lead from lead paints.

After that, lead chromate production and use declined in most high-income countries, and it became increasingly centred in low- and middle-income countries. This appears to be one of many reasons that the mean blood lead level in low- and middle-income countries is now 3.5 times higher than the mean blood lead level in high-income countries.

REF: Larsen, B., & Sánchez-Triana, E. (2023). Global health burden and cost of lead exposure in children and adults: a health impact and economic modelling analysis. *The Lancet Planetary Health*, 7(10), e831-e840. [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(23\)00166-3/fulltext?ref=assuma-o-controle-de-sua-saude.com](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(23)00166-3/fulltext?ref=assuma-o-controle-de-sua-saude.com)

Pigments are Essential Constituents in Paints

Paints are mixtures of three essential constituents: pigments, binders, and solvents.

- Pigments give a paint its colour. They also give a paint some of its other key properties such as the ability to protect the underlying surface from corrosion and from degradation caused by ultraviolet radiation.
- Binders bind pigment particles to one another and enable the pigments to adhere to the surface that is being coated.
- Solvents are liquids into which a paint's pigments, its binders, and any additives are mixed. After the paint is applied to a surface, the solvents evaporate. The pigments, binders, and any other paint ingredients then become a dry paint film.
- Some paints also contain additives called driers. But driers are not among the essential ingredients all paints contain.

Based on the Rotterdam Convention's Article 2 definition of the term "Chemical," the Convention should treat lead chromate-based pigments that are contained in a paint product as a substance in a mixture.

If the Rotterdam Convention agrees to list Lead Chromates in its Annex III, its Prior Informed Consent Procedure should apply not only to international trade in lead chromate-based pigments in their powder form, but it should also apply to lead chromate-based pigments when they are used as constituents in a paint product that is being internationally traded.

Date of entry into force of the final regulatory action: 21/09/2017

COSTA RICA

Common Name(s): Chlorothalonil ***CAS number(s):*** 1897-45-6

Chemical Name: 1,3-Benzenedicarbonitrile, 2,4,5,6-tetrachloro-

Final regulatory action has been taken for the category: Pesticide

Final regulatory action: The chemical is banned

Summary of the final regulatory action: Registration, import, export, manufacture, formulation, storage, distribution, transportation, repackaging, recontaining, handling, sale, mixing and use of raw materials or formulated products containing the active ingredient chlorothalonil is prohibited.

New applications for registration and those in process and registration renewal procedures for technical grade active ingredients and synthetic pesticides formulated on the active ingredient chlorothalonil will be rejected and archived as of the date of publication of the Executive Decree in the Official Gazette La Gaceta.

Chemical reagents for analytical standards containing chlorothalonil are excluded from the Executive Decree.

Natural or legal persons who import, export, manufacture, formulate, store, distribute, transport, repack, re-contain, manipulate, sell, mix and use will have a non-extendable period of six months throughout the national territory from the publication of the Executive Decree to exhaust their stocks in the national market. Once this period has expired, the Ministries of Agriculture and Livestock through the State Phytosanitary Service and the Ministry of Health will proceed to cancel all registrations containing this active ingredient

Use or uses prohibited by the final regulatory action: Technical grade active ingredient and all formulations containing the active ingredient chlorothalonil are prohibited, as well as all its uses in Costa Rica.

Use or uses that remain allowed: None.

The final regulatory action was based on a risk or hazard evaluation: No

Basis for the final regulatory action if other than hazard or risk evaluation: During 2021, the Regional Institute for Studies on Toxic Substances of the National University (IRET) carried out analyses on the water of the ASADA Cipreses communal aqueduct, Cartago province, finding the presumptive and unconfirmed presence of the pesticide metabolites chlorothalonil, 1,3-dicarbamoyl-2,4,5,6-tetrachlorobenzene and 4-hydroxychlorothalonil. Due to the alerts presented by IRET regarding the alleged discovery of metabolites of the pesticide chlorothalonil in the Planton spring and in the Carlos Calvo spring, sources of drinking water supply for the ASADA Cipreses de Oreamuno and the requests made by the Ministry of Health, it was agreed to carry out a joint project for the development of methodologies for the determination of pesticides and their metabolites in water, of interest between the National Water Laboratory (LNA) of the Costa Rican Institute of Aqueducts and Sewers (AYA) and the IRET; under the control of the Ministry of Health.

For the studies carried out, in August 2022 the LNA carried out the taking of samples at the ASADA of Cipreses, in the Plantón spring and the Carlos Calvo spring in order to perform tests of the analysis methodology of the metabolite 1,3-dicarbamoyl-2,4,5,6-tetrachlorobenzene, finding suspicions of the presence of this metabolite, but outlining that they required even further development of the method, the above due to the fact that the study with the supplied pattern, was concluded that the GC-MS technique, although allowing the detection of the metabolite 1,3-dicarbamoyl-2,4,5,6-tetrachlorobenzene, had limitations in terms of sensitivity since the minimum concentration that could be quantified of the pattern was 250 mg/L and this implied that applying the pre-treatment of a current sample, the quantification limit of the method would be at least 0.63 mg/L, being necessary, by the regulations of the country, to obtain values lower than 0.1 mg/L. Therefore, in order to optimize the method, it was agreed to carry out a new sampling in conjunction with IRET in the Cipreses community, said sampling was performed in September 2022.

With the sensitivity limitations of the developed method, they proceeded to inject the samples collected in the two springs of the Cipreses community (Plantón and Carlos Calvo), obtaining for the metabolite 1,3-dicarbamoyl-2,4,5,6-tetrachlorobenzene in the Plantón spring a result of 19.36 mg/L and for the Carlos Calvo spring an approximate concentration of 1.73 mg/L. The pattern used was not certified with traceability under the terms of Accreditation in the International Standard INTE-ISO/IEC 17025: 2017, (nor had a pattern that complied with this been found at the time), additionally the method used for this determination, during the development of the analyses, was not accredited, and at that time the corresponding validation was not yet available, generating little certainty in the exact concentration of the compound, however, the concentrations found were higher than the maximum admissible value under regulation DE 38924-S, thus LNA indicated that with these results, it became necessary and imperative to strengthen LNA in order to provide it with physical space, equipment and supplies to introduce new analyses, as is the case of these metabolites, in order to maintain adequate surveillance and control.

Regarding the results obtained by IRET in August and September 2022, at the ASADA of Cipreses, for the two metabolites Hydroxy-chlorothalonil and 1,3-dicarbamoyl-2,4,5,6-tetrachlorobenzene the following values were obtained:

Sampling month	Hydroxy-chlorothalonil (µg/L)		1,3-dicarbamoyl-2,4,5,6-tetrachlorobenzene (µg/L)	
	August	September	August	September
Carlos Calvo spring	n.d	n.d	0,71 + 0,05	0,83 + 0,31

Plantón spring	0,23 0,02	+		24,4 + 1,6	24,5 + 3,0
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n.d.= not detected

During the months of October and November 2022, AYA staff took water samples in the ASADA systems of Santa Rosa de Oreamuno, which were reported to IRET, confirming the presence of 1,3-dicarbamoyl-2,4,5,6- tetrachlorobenzene in most of the samples, where the following results were obtained:

Sampling point	# System	October 2022 (µg/L)	November 2022 (µg/L)
Nac. Piedra	1	7,5	7,0
Nac. Miguel Brenes	1	n.d.	n.d.
Nac. Benjamin Uleth	1	4,4	3,5
RED, home	1		3,4
Nac. Birris	2	0,36	0,4
Nac. Carlos Martinez	2	0,06	0,18
ASADA system	2		0,27
Agua Fra	3	1,6	1,4
Nac. Manuel Granados	3	0,74	1,1
RED, home	3		0,16

n.d.= not detected

* an uncertainty in the quantification of 15% is estimated

In November 2022, the closure for human consumption of seven springs in the ASADA Cipreses and Santa Rosa de Oreamuno aqueducts was determined by the Ministry of Health.

In 2022, the Environmental Quality Management Directorate (DIGECA) of the Ministry of Environment and Energy (MINAE) indicated that chlorothalonil is a highly dangerous molecule, especially for aquatic organisms, and that according to the bibliography presented, the danger posed by its metabolites is indicated due to their potential to contaminate both surface and groundwater, therefore it requested that urgent and necessary measures should be taken in order to protect human health, biodiversity and the environment.

Furthermore, DIGECA stated that chlorothalonil is a cause for concern and that despite having a low leaching potential, it can be highly toxic to fish and aquatic invertebrates when applied during periods of rain, it has moderate toxicity to birds, bees and earthworms, and it is cause of concern due to its potential for bioaccumulation in mammals. It was also emphasized what EFSA pointed out regarding the ecotoxicological information on chlorothalonil and the metabolite 4-hydroxychlorothalonil, since this metabolite can be toxic to mammals and birds, including reproductive and carcinogenic effects. In addition, they mentioned that chlorothalonil is banned in the European Union, and in Switzerland the presence of chlorothalonil by-products had been detected in groundwater and drinking water in several cantons and the levels exceeded the legal standards established for drinking water.

Regarding human health, the Ministry of Health pointed out that chlorothalonil has certain properties that generate concerns for human health, in addition to having a high threshold of toxicological concern that is a simple indicator of toxicity useful to evaluate chemical products when there is little toxicity data available, it also mentioned that chlorothalonil creates significant health concerns since it is categorized in group 2B as a probable human carcinogen according to the International Agency for Research on Cancer (IARC) it also presents health concerns due to its possibility of being an endocrine disruptor and generate effects on embryonic development, reference was made to a specific compilation of health

concerns and problems of chlorothalonil, this information was taken from the Agricultural & Environmental Research Unit.

In addition, it stated that according to the international database (Agricultural & Environmental Research Unit) there is little relevant information in relation to the metabolite 4-hydroxychlorothalonil, however, this metabolite presents greater acute toxicity in mammals with respect to its original molecule and presents a lower acute reference dose compared to that of chlorothalonil. There is also no evidence that 4-hydroxychlorothalonil causes cancer, but there is a health warning as there are no studies proving otherwise. The concern also extends to other pathologies, as the effects of chlorothalonil metabolites on the human body are unknown.

The Ministry of Health, the Ministry of Environment and Energy and AYA pointed out that although little is known about the effects that these compounds may have on human health, the precautionary principle should be applied in decision-making and preventive measures should be taken to minimize exposure to these compounds, and the ban on the use of chlorothalonil in the European Union was an example of how the precautionary principle is being applied to protect human health and the environment.

In 2021, a resident of Cipreses filed an appeal for protection, considering that his fundamental rights had been violated, since the aqueduct had contamination problems with chlorothalonil, so the Ministry of Health issued sanitary orders and the closure of five water sources. For this reason, in June 2023, the Constitutional Court declared the appeal for protection admissible and ordered that within a period of six months the recommendations made by the Ministry of Health, the Ministry of Environment and Energy and AYA would be adopted and executed, three of these recommendations, which include the prohibition, were the following:

- It is the responsibility of the Costa Rican State to regulate the use of chemical substances in agriculture, in order to guarantee their correct management and use, without representing unacceptable risks for human health and the environment. Although some substances can be used in accordance with the recommendations for use, it is important to consider the potential risks that the metabolites and generated waste can represent, and to apply the precautionary principle to make informed decisions and protect the health and the well-being of the population and the ecosystem.
- Based on the danger alerts for chlorothalonil and the concern that the registered products based on this Technical Grade Active Ingredient (IAGT) do not have the environmental endorsement of DIGECA, it is considered that, in order to safeguard the environment, it is essential that the current registrations based on this pesticide can be cancelled. The above is in accordance with the provisions of numeral 14.1.3.1 and 14.2.1.2 of DE 40059 and 16.2 of DE 43838 and in article 29 and 30 of Law 7664, the Plant Protection Law, regarding suspensions and cancellations of registration.
- In accordance with the recommendations set forth, as well as the risks analyzed, it is recommended to prohibit the use of chlorothalonil in Costa Rica, in line with the measures adopted by the European Union. Safety measures and alternatives for agriculture must be implemented to minimize the exposure of workers and consumers, as well as to ensure the protection of water sources, the environment and the health of the population.

Summary of known hazards and risks to human health: Not applicable.

Expected effect of the final regulatory action in relation to human health: Not applicable.

Summary of known hazards and risks to the environment: Not applicable

Expected effect of the final regulatory action in relation to the environment: Not applicable.

Date of entry into force of the final regulatory action: 24/10/2023

ECUADOR

Common Name(s): Terbufos **CAS number(s):** 13071-79-9

Chemical Name: S-[(tert-Butylsulfanyl)methyl] O,O-diethyl phosphorodithioate

Final regulatory action has been taken for the category: Pesticide.

Final regulatory action: The chemical is banned.

Summary of the final regulatory action: Article 1.- Cancel all registrations of products containing the active ingredient terbufos, in accordance with the provisions of literal f) of article 32 of CAN Decision 804, "Andean Standard for the Registration and Control of Chemical Pesticides for Agricultural Use in the Andean Community".

Article 2.- Cancel all procedures that have been submitted to the Phytosanitary and Zoosanitary Regulation and Control Agency requesting the registration of products containing the active ingredient terbufos.

Article 3.- Prohibit the importation of products containing the active ingredient terbufos. Imports in the process of production, dispatch and/or transit that were authorized until July 19, 2024, may be nationalized during the validity of the permit.

Article 4.- Allow sale of products containing the active ingredient terbufos, during the shelf life of the imported batch, printed on the product label.

Article 5.- Companies holding registrations for products containing the active ingredient terbufos must submit a report on stocks and sales to the Phytosanitary and Zoosanitary Regulation and Control Agency by August 12, 2024. From this date, they will submit bi-monthly reports on sales and stocks of the same.

Use or uses prohibited by the final regulatory action: Agricultural pesticides containing Terbufos molecule in any formulation are totally prohibited.

The final regulatory action was based on a risk or hazard evaluation: No

Basis for the final regulatory action if other than hazard or risk evaluation: For being harmful to health and the environment, and based on Constituent Mandate 16, article 18 of 2008.

The reasons for the final regulatory action were relevant to: Human health and environment

Summary of known hazards and risks to human health: Terbufos is an organophosphate (OP) pesticide, this involves the inhibition of the enzyme acetylcholinesterase (AChE) by phosphorylation of the serine residue at the enzyme active site. This inhibition leads to the accumulation of acetylcholine and ultimately to neurotoxicity in the central and/or peripheral nervous system. For Terbufos, AChE inhibition is the most sensitive endpoint in the toxicological database across multiple species, duration, life stages and routes.

Terbufos is classified as "not likely to be carcinogenic to humans." Acute toxicity data for terbufos show that this chemical is extremely toxic. Terbufos is classified as Toxicity Category I by dermal route and was not classified for acute eye irritation because it caused 100% death in test animals within 24 hours. The skin sensitization study was not performed for terbufos due to its acute lethality.

Expected effect of the final regulatory action in relation to human health: Reduction of risks from the use of the highly hazardous pesticides (Ib Highly Hazardous).

Summary of known hazards and risks to the environment: Ecological effects Effects on birds:

Terbufos is extremely toxic to birds. Its acute LD50 in Japanese quail is 28.6 mg/kg. Its LC50 is 143 to 157 ppm in quail. The LC50 reported in Japanese quail is 196 to 265 ppm in a 5-day study. No effects on bird reproduction have been demonstrated from chronic exposure to Terbufos.

Effects on aquatic organisms:

Terbufos is extremely toxic to fish and aquatic invertebrates. The LC50 in *Daphnia magna* and *Gammarus pseudogomnaens*, freshwater invertebrates, is 0.00031 mg/l and 0.0002 mg/l respectively. The LC50 values for the technical material (88%) are 0.008 to 0.0013 mg/l in rainbow trout, 0.390 mg/l in fathead minnows and 0.0017 to 0.0024 mg/l in perch. The compound has a moderate potential to accumulate in the tissues of aquatic organisms.

Effects on other organisms:

Terbufos is expected to be extremely toxic to mammals and reptiles. It is not toxic to bees.

Breakdown in soils and groundwater:

Terbufos is low to moderately persistent in soils. It is rapidly converted to its metabolites which tend to persist in soil and are detected at harvest time. Terbufos and its metabolites degrade rapidly during the first 15 to 30 days after application, then gradually stabilize. Terbufos is generally immobile and therefore is not likely to leach and contaminate groundwater. Much of the chemical can be recovered near the application site. Being of low water solubility, Terbufos is not frequently found in groundwater. It has been found in a few groundwater samples collected at a few locations in the United States, at concentrations of approximately 0.01 mg/l.

Expected effect of the final regulatory action in relation to the environment: Terbufos may cause environmental damage. Preventing the use of this chemical protects the environment and non-target organisms from the risks associated with exposure.

Information on alternatives and their relative risks, e.g. IPM, chemical and non-chemical alternatives: For *Radopholus similis* pest in banana crops (*Musa acuminata* AAA) the following substitutes are available:

N°	Product type	Subproduct type	Product composition
1	Pesticide	Nematicide	Active ingredient Myrothecium verrucaria 950 G/KG, GR
2	Pesticide	Nematicide	Active ingredient ethoprophos 150 G/KG, GR
3	Pesticide	Nematicide	Active ingredient Benfuracarb 208 G/L, EC
4	Pesticide	Nematicide	Active ingredient cadusafos 100 G/KG, GR
5	Pesticide	Nematicide	Active ingredient Abamectin 36 G/L, Active ingredient thiamethoxam 72 G/L, SC
6	Pesticide	Nematicide	Active ingredient fluopyram 500 G/L, SC
7	Pesticide	Nematicide	Active ingredient oxamyl 235.2 G/L, SL
8	Pesticide	Nematicide	Active ingredient Carvacrol 20 G/L, EA
9	Pesticide	Nematicide	Active ingredient oxamyl 240 G/L, SL
10	Biopesticide	ACB -microbial agent	Active ingredient Bacillus methylotrophicus cepa GF 267 1x10 ⁹ UFC/ml,SC
11	Biopesticide	Vegetal extract	Active ingredient Garlic extract (<i>Allium sativum</i>) 80 %,SC
12	Biopesticide	ACB – microbial agent	Active ingredient Paecilomyces lilacinus 1x10 ⁸ UFC/ml, Active ingredient Pochonia chlamydosporia 1x10 ⁸ UFC/ml,SC
13	Biopesticide	Vegetal extract	Active ingredient Extracto de canela (<i>Cinnamomum verum</i>) 309 G/L, Active ingredient Pine extract (<i>Pinus elliottii</i> y <i>Pinus taeda</i>) 68.5 G/L, EC
14	Biopesticide	ACB – microbial agent	Active ingredient Bacillus methylotrophicus cepa GF 267 1x10 ⁹ UFC/ml,SC

To control pest *Sagalassa valida* in African palm (*Elaeis guineensis*) the following substitutes are available:

Nº	Product type	Subproduct type	Product composition
1	Pesticide	Insecticide	Active ingredient benfuracarb 212 G/L, EC
2	Pesticide	Insecticide	Active ingredient Allyl isothiocyanate 5.63 G/L, Active ingredient Capsaicin 0.3 G/L, SL
3	Pesticide	Insecticide	Active ingredient lambda-cyhalothrin 106 G/L, Active ingredient thiamethoxam 141 G/L, SC
4	Pesticide	Insecticide	Active ingredient diflubenzuron 480 G/L, SC
5	Pesticide	Insecticide	Active ingredient Benfuracarb 208 G/L, EC
6	Pesticide	Insecticide	Active ingredient pyridalyl 500 G/L, EC
7	Pesticide	Insecticide	Active ingredient imidacloprid 350 G/L, EC
8	Pesticide	Insecticide	Active ingredient Carbosulfan 480 G/L, EC
9	Pesticide	Insecticide	Active ingredient Bifenthrin 50 G/L, Active ingredient imidacloprid 250 G/L, SC
10	Pesticide	Insecticide	Active ingredient Benfuracarb 212 g/l, EC

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

Ecuador possesses the Constituent Mandate 16, Food Sovereignty Program, Legislative Decree 16 in its Article 18, mentions "The importation and commercialization of pesticides for agricultural use established in Annex III of the Rotterdam Convention on the prior consent procedure applicable to certain pesticides and hazardous chemical products subject to international trade, signed and ratified by Ecuador, and in provisions of the Andean Community of Nations (CAN), is expressly prohibited due to its proven harmful influence on the health of the people and vital ecosystems".

On the other hand, the Secretariat of the Rotterdam Convention sends to all parties the PIC Circular LVIII ((58) of December 2023), in which it reports the results of the meetings of the Conference of the Parties to the Basel, Rotterdam and Stockholm conventions held in May 2023. The Conference of the Parties to the Rotterdam Convention (COP-11) by decisions RC-11/3 decided to amend Annex III of the Convention to include terbufos, therefore, subject to the Prior Informed Consent Procedure, and approved the decision guidance document (DGD) regarding the chemical TERBUFOS with CAS number 13071-79-9 category pesticides.

The amendment to include Terbufos in Annex III entered into force for all parties on October 22, 2023. The parties have the obligation to comply with the provisions of paragraph 2 of Article 10 of the Rotterdam Convention. To comply with this requirement for the case of Terbufos, it should be before 21 July 2024.

Based on the above, the Phytosanitary and Zoosanitary Regulation and Control Agency as the Designated National Authority for agricultural use pesticides, issues resolution 102, referring to the "(..) Cancel register of products containing the active ingredient TERBUFOS (..)"

Date of entry into force of the final regulatory action: 19/07/2024

EUROPEAN UNION

Common Name(s): Dichlorvos

CAS number(s): 62-73-7

Chemical Name: 2,2-Dichlorovinyl dimethyl phosphate

Final regulatory action has been taken for the category: Pesticide.

Final regulatory action: The chemical is banned.

Summary of the final regulatory action: It is prohibited to place on the market or use plant protection products containing dichlorvos. Dichlorvos is not included in the list of authorised active substances in Annex I to Directive 91/414/EEC. Authorisations for plant protection products containing dichlorvos had to be withdrawn by 6 December 2007.

From 7 June 2007 no authorisations for plant protection products containing dichlorvos can be granted or renewed.

It is prohibited to place on the market or use biocidal products containing dichlorvos. Dichlorvos has not been approved for inclusion in Annex I, IA or IB to Directive 98/8/EC for its use in biocidal products of product- type 18.

Use or uses prohibited by the final regulatory action: All uses of dichlorvos as a plant protection product were prohibited.

All applications of dichlorvos as a biocidal product for product-type 18 (insecticides, acaricides and products to control other arthropods) were prohibited. No other uses of dichlorvos as biocidal product are authorised in the European Union.

Use or uses that remain allowed: Not relevant.

The final regulatory action was based on a risk or hazard evaluation: Yes

The reasons for the final regulatory action were relevant to: Human health and environment

Summary of known hazards and risks to human health: Risk evaluation for the use of Dichlorvos as active substance in biocidal products:

Risk Characterization for Human Health for carcinogenic effects exerting through the threshold mechanism.

Dichlorvos is a volatile active substance and therefore, the inhalation route is the main exposure route in all the considered scenarios.

The chronic exposure estimate for bystanders (consumers or workers in the area where the strip is present) has been associated to a potential risk for all the scenarios considered (cupboards, non-occupied room and barns).

For the calculation of the risk related to the bystander exposure the AEL approach has been adopted. To this purpose a chronic AEL of 0.0005 mg/m³ has been derived from a NOAEC of 0.05 mg/m³ (2-year inhalation study in rats) taking into account an assessment factor of 1 for interspecies variability, 10 for intraspecies variability and an additional safety factor of 10 due to the nature of the induced effects. In all the scenarios evaluated for chronic exposure the derived exposure estimates are higher than the AEL.

AELacute = 0.01 mg/kg bw/d: Overall NOAEL for acute neurotoxicity in rats of 1.0 mg/kg bw, AF 100.

AELlong-term = 0.0005 mg/m³: NOAEC of 0.05 mg/m³ from the results from the 2-yr rat study, supported by the 1-yr dog study, and an AF 100.

AELlong-term = 2.5 x 10⁻⁴ mg/kg bw/d: NOAEC of 0.05 mg/m³ from the results from the 2-yr rat study, supported by the 1-yr dog study, and an AF 100. Inhalation volume: 30 m³/d (1.25 m³/h x 24 h) and Body weight: 60 kg.

The following values have been calculated for the humans chronically exposed to Dichlorvos in Pest Strip:

- Use scenario: In house (small areas, cupboards, Garbage cans (note that for garbage cans outdoors only the opening and hanging exposures are relevant) Chronic inhalation exposure: 0.022 mg/m³ (0.011 mg/kg bw/d)
 - AEC Approach (% of the AEC): 4400
 - AEL Approach (% of the AEL): 4400
- Use scenario: In house (attics / non-occupied rooms) Chronic inhalation exposure: 0.015 mg/m³ (7.5 x 10⁻³ mg/kg bw/d)
 - AEC Approach (% of the AEC): 3000
 - AEL Approach (% of the AEL): 3000
- Use scenario: Barns, Warehouses/storage, Animal buildings Chronic inhalation exposure: 0.0041 mg/m³ (2.1 x 10⁻³ mg/kg bw/d)
 - AEC Approach (% of the AEC): 820
 - AEL Approach (% of the AEL): 840
- Use scenario: Barns, Warehouses/storage, Animal buildings (from new values on barn application) Chronic inhalation exposure: 0.0503 mg/m³ (2.5 x 10⁻² mg/kg bw/d)
 - AEC Approach (% of the AEC): 10060
 - AEL Approach (% of the AEL): 10000

A potential risk has been identified for all the chronic scenarios.

Risk Characterization for Human Health for carcinogenic effects exerting through the non-threshold mechanism

The T25 dose-descriptor approach (dose defined as the chronic dose rate giving a 25% incidence of cancer in an appropriately designed animal experiment, within the standard lifetime of that species) has highlighted that an unacceptable risk occur from long-term exposures to pest-strip containing Dichlorvos as active substance. The exposure values for consumers and workers are above the DMELs calculated by “Linearized” approach and **no safe scenarios can be identified** for the relevant intended uses.

The following exposure values have been derived for all the intended uses proposed for Dichlorvos.

Exposure scenario	PPE	Chronic Inhalation exposure (mg/m ³)	Chronic Inhalation exposure (mg/kg bw/d)	Exposure value / DMEL
In house (small areas, cupboards) Garbage cans (note that for garbage cans only the opening and hanging exposures are relevant)	No	0.022 mg/m ³	0.011 mg/kg pc/d	Consumer : 500 Worker : 10
In house (attics / non-occupied rooms)	No	0.015 mg/m ³	7.7 x 10 ⁻³ mg/kg bw/d	Consumer : 350 Worker : 7.2
*Warehouses/storage Animal buildings	No	0.0041 mg/m ³	2.1 x 10 ⁻³ mg/kg bw/d	Consumer : 92 Worker : 1.9
**Warehouses/storage Animal buildings	No	0.0503 mg/m ³	2.5 x 10 ⁻² mg/kg bw/d	Consumer : 500 Worker : 23.1

* Assuming a farmer working in a barn 8 hours/day

** Exposure value calculated on the basis of the new information provided by AMVAC on barn application (see Annex II attached below)

Dichlorvos is toxic following acute oral and dermal exposure and very toxic after acute inhalation exposure. It is expected to be slightly irritating to the skin and eyes. Dichlorvos was found to have a skin sensitizing potential. Limited evidence of a carcinogenic effect (Carc. Cat. 3) and a possible risk of irreversible effects (Muta. Cat. 3) has been shown based on the available data. The following classification was proposed: R24/25 Toxic in contact with skin and if swallowed, R26 Very toxic by inhalation, R40 Limited evidence of

a carcinogenic effect (Carc. Cat. 3), R43 May cause sensitization by skin contact, R68 Possible risk of irreversible effects (Muta. Cat. 3).

Dichlorvos did not pose any concern for specific reproductive and developmental toxicity at dose levels not inducing maternal or general toxicity. Based on the available data, no delayed neuropathy was observed. As concerns mutagenicity, the experimental data are consistent with a model that describes Dichlorvos as a weak, directly acting, methylating agent. At least a genotoxic molecule is produced by dichlorvos metabolism, namely dichloroacetaldehyde, but there is no evidence of its role in the in vivo genotoxicity of the insecticide. Therefore, the compound should be mainly considered a potential site of contact mutagen. As regards carcinogenicity, there is some evidence for a carcinogenic effect of Dichlorvos from standard bioassays in mice, namely tumors of the forestomach in mice after gavage dosing and oesophageal tumors after dietary administration. In those studies where Dichlorvos-related tumors were identified, positive effects were observed also at the lowest administered dose. In view of the mutagenic potential of the compound as an in vivo mutagen at the site-of-contact and since no alternative satisfactory explanation for the mechanisms of these tumors has been given, it is prudent to take a precautionary approach and assume a genotoxic mechanism underlying the carcinogenicity of Dichlorvos. Thus, **no threshold can be assumed for the mutagenic and carcinogenic effects of Dichlorvos.**

Summary conclusion: Considering that the substance may exert its own toxicity through a non-threshold or a threshold carcinogenic mechanism, both risk characterizations have been performed. However, in both cases, the risk ratios have highlighted a potential and unacceptable risk for all the relevant scenarios, where exposure is likely to occur. Therefore, an inclusion in Annex I of Directive 98/8/EC cannot be recommended for dichlorvos as an active substance for the use as product-type 18 (Insecticide).

Reference:

European Union Assessment report Dichlorvos (PT 18) - Finalised in the Standing Committee on Biocidal Products at its meeting on 9th December 2011 in view of its inclusion in Annex I or IA to Directive 98/8/EC.

Risk evaluation for use of dichlorvos as active substance in plant protection products

During the evaluation of this active substance, a number of concerns were identified. In particular, based on the available toxicological data and taking into account the uncertainties of the genotoxic and carcinogenic properties of the substance also considering the overall poor quality of the dossier, it has not been demonstrated that the estimated operator, worker and bystander exposure is acceptable.

Reference:

European Commission (2006): Review Report for the active substance dichlorvos – Finalized in the Standing Committee on the Food Chain and Animal Health at its meeting on 29 September 2006 in support of a decision concerning the non-inclusion of dichlorvos in Annex I Directive 91/414/EEC and the withdrawal of authorization for plant protection products containing this active substance. SANCO/10031/2006 final, 04 July 2006.

EFSA (2006): Conclusion regarding the peer review of the pesticide risk assessment of the active substance dichlorvos. EFSA Scientific Report 77, p. 1-43. <http://www.efsa.europa.eu/en/scdocs/doc/77r.pdf>

Expected effect of the final regulatory action in relation to human health: Reduction of risks to human health and the environment from the use of plant protection and biocidal products containing dichlorvos.

Summary of known hazards and risks to the environment: Risk evaluation for the use of Dichlorvos as active substance in biocidal products.

Dichlorvos has been proved to be very toxic for aquatic organisms. Therefore, it was proposed classifying dichlorvos as R50-53 - Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

Taking into account the uses supported by the applicant, it has been concluded that all the scenarios pose an unacceptable risk for the environment.

Because the dichlorvos strip is only used in-house, emissions to the environment will occur indirectly as a result of dry or wet cleaning of indoor receiving materials such as furniture, equipment, clothes, walls and floors. Cleaning will lead to releases either to wastes or to waste water. Therefore, the sewage treatment plants (STP) were considered as one of the main “receiving compartments”. In Europe, estimates of potential exposures from STP are carried out using standard calculation frameworks from a Technical Guidance Document. According to this guidance, the “final” environmental compartments are surface water and sediment, soil and groundwater (via sewage sludge application onto soil) and outdoor air. Two exposure scenarios were evaluated: one where 60% of dichlorvos contained in the strip is released over the strip’s lifetime, and a worst-case scenario where 100 % of dichlorvos is released.

Assuming standard insecticide treatment frequencies resulting from a survey in France, and a standard number of private houses and large buildings in each STP catchment, cumulative Predicted Environmental Concentrations (PEC) were calculated from PEC values for releases via waste water from private households and large buildings. The ratios of these PEC to the Predicted No-effect Concentration (PNEC) for surface water, sediment and soil were >> than 1 for both release scenarios. Thus, it was concluded that the use of dichlorvos poses an unacceptable risk for surface water, sediment and soil.

Therefore, an inclusion in Annex I of Directive 98/8/EC cannot be recommended for Dichlorvos as an active substance for the use as product-type 18 (Insecticide). Reference: European Union Assessment report Dichlorvos (PT 18) - Finalized in the Standing Committee on Biocidal Products at its meeting on 9th December 2011 in view of its inclusion in Annex I or IA to Directive 98/8/EC.

Expected effect of the final regulatory action in relation to the environment: Reduction of risk to the environment from the use of biocidal products containing dichlorvos.

Additional information related to the chemical or the final regulatory action, if any: The risk assessment for dichlorvos under Directive 91/414/EEC for use as plant protection product was carried out for the specific use as room treatment for protection of flower bulbs against thrips. Therefore, very few data had been submitted for the environmental risk assessment and experts agreed that a comprehensive environmental risk assessment was not needed for the indoor use since e.g. non-target organisms (e.g. terrestrial vertebrates, aquatic organisms, bees and other non-target arthropods, soil macro- and micro-organisms) were not expected to be exposed to dichlorvos.

Date of entry into force of the final regulatory action: 06/12/2008

EUROPEAN UNION**Common Name(s):** Fipronil**CAS number(s):** 120068-37-3**Chemical Name:** (±)-5-Amino-1-(2,6-dichloro- α,α -trifluoro-paratolyl)-4-trifluoromethylsulfinyl-pyrazole-3 carbonitrile**Final regulatory action has been taken for the category:** Pesticide**Final regulatory action:** The chemical is banned.**Summary of the final regulatory action:** The application for the renewal of the approval of fipronil as an active substance under Regulation (EC) No 1107/2009 was submitted by the applicant, but the supplementary dossier in support of renewal was not submitted. Consequently, the approval of fipronil expired on 30 September 2017. As a result, fipronil was removed from the list of approved active substances and it is prohibited to place on the market or use plant protection products containing fipronil because fipronil is not approved as an active substance in accordance with Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market.

Disposal, storage, placing on the market and use of existing stocks of plant protection products containing fipronil is prohibited as of 1 October 2017.

In addition, the approval of fipronil as an active substance for use in biocidal products of product-type 18 (insecticides, acaricides and products to control other arthropods) under Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products expired on 30 September 2023.

Use or uses prohibited by the final regulatory action: All applications as a plant protection product.**Use or uses that remain allowed:****The final regulatory action was based on a risk or hazard evaluation:** No**Basis for the final regulatory action if other than hazard or risk evaluation:** In the European Union, active substances for use in plant protection products are approved for a certain period in accordance with Regulation (EC) No 1107/2009. The active substance fipronil had been approved under Regulation (EC) No 1107/2009. An application for the renewal of that approval was submitted, but the supplementary dossier in support of the renewal was not submitted. Consequently, the approval expired on 30 September 2017, with the effect that the use of fipronil is banned in the European Union.**The reasons for the final regulatory action were relevant to:** Environment**Summary of known hazards and risks to human health:** Not relevant.**Expected effect of the final regulatory action in relation to human health:** Not relevant.**Summary of known hazards and risks to the environment:** Not relevant.**Expected effect of the final regulatory action in relation to the environment:** Not relevant.**Additional information related to the chemical or the final regulatory action, if any:** The use of fipronil as an active substance in plant protection products was initially authorized in the EU from 1 October 2007 by Commission Directive 2007/52/EC only for its use as insecticide for seed treatment, subject to the condition that the seed coating was performed in professional seed treatment facilities.

In March 2012 the European Commission asked the European Food Safety Authority (EFSA) to assess the information provided by the Italian authorities to support their temporary suspension of fipronil, in particular the report from the Italian project APENET. APENET was a multidisciplinary monitoring and research project, mainly aimed at evaluating the bee health status, the dust dispersal during the sowing of maize coated seeds with thiamethoxam, clothianidin, imidacloprid and fipronil, the lethal effects on bees exposed to this dust, and homing behavior and orientation effects.

Following the publication of the statement by EFSA on the APENET project in June 2012, and in accordance with Article 21 of Regulation (EC) No 1107/2009 to review the approval of active substances in light of new scientific and technical knowledge and monitoring data, in August 2012 the European Commission requested EFSA to perform an evaluation of the active substance fipronil and deliver its

conclusions on the risk assessment for bees, in particular with regard to the acute and chronic effects on colony survival and development, taking into account effects on bee larvae and bee behavior, and the effects of sublethal doses on bee survival and behavior.

EFSA presented its conclusions on the risk assessment for fipronil as regards bees on 27 May 2013. The conclusion of EFSA was reviewed by the Member States and the European Commission within the Standing Committee on the Food Chain and Animal Health and finalized on 16 July in the format of an addendum to the review report on fipronil.

In particular, EFSA identified for the use as seed treatment in maize, high acute risks for bees from plant protection products containing the active substance fipronil. The Authority identified in particular a high acute risk for bees resulting from dust. In addition, unacceptable risks due to acute or chronic effects on colony survival and development could not be excluded for several crops. Furthermore, EFSA identified some missing information for each of the evaluated uses, in particular as regards long term risk to honeybees from dust exposure, from potential exposure to residues in pollen and nectar, from potential exposure to guttation fluid and from exposure to residues in succeeding crops, weeds and soil.

The overall conclusion from the review is that a risk to bees cannot be excluded except by imposing further restrictions to the use of plant protection products. In order to minimize the exposure of bees, it was considered appropriate to restrict the use of plant protection products containing fipronil in the EU and to provide for specific risk mitigation measures for the protection of bees, which were implemented by Commission Implementing Regulation (EU) No 781/2013.

Commission Implementing Regulation (EU) No 781/2013 restricted, from 1 March 2014, the authorization of fipronil as active substance in plant protection products only for uses as insecticide for seed treatment for seeds intended to be sown in greenhouses and seeds of leek, onions, shallots and the group of Brassica vegetables intended to be sown in fields and harvested before flowering.

In addition, the applicant was requested to submit by 30 March 2015 confirmatory information as regards:

- (a) the risk to pollinators other than honey bees;
- (b) the acute and long-term risk to colony survival and development, and the risk to bee brood from plant and soil metabolites, except the soil photolysis metabolites;
- (c) the potential exposure to dust drift emitted during the drilling procedure and the acute and long-term risk to colony survival and development, and the risk to bee brood for situations where bees forage on vegetation exposed to dust drift;
- (d) the acute and long-term risk to colony survival and development, and the risk to bee brood from foraging on insect honeydew;
- (e) the potential exposure to guttation fluid and the acute and long-term risk to colony survival and development, and the risk to bee brood;
- (f) the potential exposure to residues in nectar and pollen, honeydew and guttation fluid of succeeding crops or weeds occurring in fields, including the persistent soil metabolites (RPA 200766, MB 46136 and MB 45950).

Commission Implementing Regulation (EU) No 781/2013 of 14 August 2013 amending Implementing Regulation (EU) No 540/2011, as regards the conditions of approval of the active substance fipronil, and prohibiting the use and sale of seeds treated with plant protection products containing this active substance (Official Journal of the European Union L 219, 15.8.2013, p. 22).
http://data.europa.eu/eli/reg_impl/2013/781/oj

Addendum to the Review report for the active substance fipronil Finalised in the Standing Committee on the Food Chain and Animal Health at its meeting on 16 July 2013 in view of the review of fipronil as regards the risk to bees in accordance with Article 21 of Regulation (EC) No 1107/2009.
https://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/backend/api/active_substance/download/204

European Food Safety Authority (2013). Conclusion on the peer review of the pesticide risk assessment for bees for the active substance fipronil. EFSA Journal 2013;11(5):3158. [51 pp.]
<https://doi.org/10.2903/j.efsa.2013.3158>

European Food Safety Authority (2012). Statement on the assessment of the scientific information from the Italian project “APENET” investigating effects on honeybees of coated maize seeds with some neonicotinoids and fipronil. EFSA Journal 2012;10(6):2792. [26 pp.] <https://doi.org/10.2903/j.efsa.2012.2792>

Date of entry into force of the final regulatory action: 30/09/2017

EUROPEAN UNION

Common Name(s): Glufosinate **CAS number(s):** 77182-82-2

Chemical Name: Ammonium(DL)-homoalanin-4-yl(methyl)phosphinate (glufosinate-ammonium)

Final regulatory action has been taken for the category: Pesticide.

Final regulatory action: The chemical is banned.

Summary of the final regulatory action: The application for the renewal of the approval of glufosinate as an active substance under Regulation (EC) No 1107/2009 was withdrawn by the applicant. Consequently, the approval of glufosinate expired on 31 July 2018. As a result, glufosinate was removed from the list of approved active substances and it is prohibited to place on the market or use plant protection products containing glufosinate because glufosinate is not approved as an active substance in accordance with Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market. Disposal, storage, placing on the market and use of existing stocks of plant protection products containing glufosinate is prohibited as of 1 August 2018.

Use or uses prohibited by the final regulatory action: All applications as a plant protection product.

Use or uses that remain allowed: Not relevant

The final regulatory action was based on a risk or hazard evaluation: No

Basis for the final regulatory action if other than hazard or risk evaluation: In the European Union, active substances for use in plant protection products are approved for a certain period in accordance with Regulation (EC) No 1107/2009. By Implementing Regulation (EU) 2015/404, the European Commission decided to extend the approval period of the active substance glufosinate under Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market, following an application for renewal of the approval of that active substance. Since that application has been withdrawn, the approval expired on 31 July 2018 and glufosinate is no longer approved as active substance under Regulation (EC) No 1107/2009, with the effect that it is prohibited to place on the market or use plant protection products containing glufosinate.

Summary of known hazards and risks to human health: Not relevant

Expected effect of the final regulatory action in relation to human health: Not relevant

Summary of known hazards and risks to the environment: Not relevant

Expected effect of the final regulatory action in relation to the environment: Not relevant

Additional information related to the chemical or the final regulatory action, if any: Commission Directive 2007/25/EC included glufosinate as active substance in Annex I to Council Directive 91/414/EEC concerning the placing of plant protection products on the market, under the condition that the Member States concerned ensured that the notifier at whose request glufosinate was included in that Annex provide further confirmatory information on the risk for mammals and non-target arthropods in apple orchard.

The notifier submitted additional information taking the form of studies with a view to confirm the risk assessment for mammals and non-target arthropods in apple orchards to the rapporteur Member State within the time period provided for its submission.

The European Commission consulted the European Food Safety Authority (EFSA), which presented its opinion on the risk assessment of glufosinate on 8 March 2012. The draft assessment report, the

additional report and the opinion of the Authority were reviewed by the Member States and the Commission within the Standing Committee on the Food Chain and Animal Health and finalised on 15 March 2013 in the format of the Commission review report for glufosinate.

The risk evaluation was done *inter alia* by means of simulation models (e.g. FOCUS groundwater and surface water models) that have been developed for the EU risk evaluation and/or with data generated in the EU in order to represent the conditions that prevail in the EU. Detailed information on the risk evaluation can also be found in the respective guidance produced by EFSA.

In the light of the additional information provided by the notifier, the European Commission considered that the further confirmatory information required had not been provided and that a high risk for mammals and non-target arthropods could not be excluded except by imposing further restrictions. As a consequence, the use of glufosinate as an active substance in the EU was further restricted from 6 March 2012 by Commission Implementing Regulation (EU) No 365/2013 only for its use as herbicide for band or spot application at rates not exceeding 750 g active substance/ha (treated surface) per application and maximum two applications per year.

The Member States were required to pay particular attention when granting authorisations for plant protection products containing glufosinate to:

- (a) the operator, worker and bystander safety; conditions of authorisation shall include protective measures, where appropriate;
- (b) the potential for groundwater contamination, where the active substance is applied in regions with vulnerable soil or climatic conditions;
- (c) the protection of mammals, non-target arthropods and non-target plants.

Conditions of authorisation included the application of drift reducing nozzles and spray shields in addition to further risk mitigation measures, where appropriate.

It should be noted that Council Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products on the market was repealed on 13 September 2011 by Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market.

Commission Implementing Regulation (EU) No 365/2013 of 22 April 2013 amending Implementing Regulation (EU) No 540/2011 as regards the conditions of approval of the active substance glufosinate (Official Journal of the European Union L 111, 23.4.2013, p. 27).

http://data.europa.eu/eli/reg_impl/2013/365/oj

Final Review report for the active substance glufosinate finalised in the Standing Committee on the Food Chain and Animal Health at its meeting on 15 March 2013 in view of the inclusion of glufosinate in Annex I of Directive 91/414/EEC. Available from:

https://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/active-substances/?event=as.details&as_id=79

Date of entry into force of the final regulatory action: 31/07/2018

EUROPEAN UNION

Common Name(s): Maneb **CAS number(s):** 12427-38-2

Chemical Name: Manganese ethylenebis (dithiocarbamate) (polymeric)

Final regulatory action has been taken for the category: Pesticide.

Final regulatory action: The chemical is banned.

Summary of the final regulatory action: The application for the renewal of the approval of maneb as an active substance under Regulation (EC) No 1107/2009 was submitted by the applicant, but the supplementary dossier in support of renewal was not submitted. Consequently, the approval of maneb expired on 31 January 2017. As a result, maneb was removed from the list of approved active substances and it is prohibited to place on the market or use plant protection products containing maneb because maneb is not approved as an active substance in accordance with Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market. Disposal, storage, placing on the market and use of existing stocks of plant protection products containing maneb is prohibited as of 1 February 2017.

Use or uses prohibited by the final regulatory action: All applications as a plant protection product.

Use or uses that remain allowed: Not relevant

The final regulatory action was based on a risk or hazard evaluation: No

Basis for the final regulatory action if other than hazard or risk evaluation: In the European Union, active substances for use in plant protection products are approved for a certain period in accordance with Regulation (EC) No 1107/2009. The active substance maneb had been approved under Regulation (EC) No 1107/2009. An application for the renewal of that approval was submitted, but the supplementary dossier in support of the renewal was not submitted. Consequently, the approval expired on 31 January 2017, with the effect that the use of maneb is banned in the European Union.

Summary of known hazards and risks to human health: Not relevant

Expected effect of the final regulatory action in relation to human health: Not relevant

Summary of known hazards and risks to the environment: Not relevant

Expected effect of the final regulatory action in relation to the environment: Not relevant

Additional information related to the chemical or the final regulatory action, if any: The approval of maneb had been granted in 2005 by Commission Directive 2005/72/EC of 21 October 2005 amending Council Directive 91/414/EEC to include chlorpyrifos, chlorpyrifos-methyl, mancozeb, maneb, and metiram as active substances (Official Journal of the European Union L 279, 22.10.2005, p. 63. That legal act and the Final review report for the active substance maneb provide certain specific provisions that had to be respected by the EU Member States when granting national authorisations of plant protection products containing maneb as follows:

- Member States must pay particular attention to the potential for groundwater contamination when the active substance is applied in regions with vulnerable soils and/or extreme climatic conditions.
- Member States must pay particular attention to the residues in food and evaluate the dietary exposure of consumers.
- Member States must pay particular attention to the protection of birds, mammals, aquatic organisms and non-target arthropods and must ensure that the conditions of authorization include, where appropriate, risk mitigation measures.
- Member States shall request the submission of further studies to confirm the risk assessment for birds and mammals and for developmental toxicity.

Date of entry into force of the final regulatory action: 31/01/2017

EUROPEAN UNION**Common Name(s):** Pencycuron**CAS number(s):** 66063-05-6**Chemical Name:** 1-(4-Chlorobenzyl)-1-cyclopentyl-3-phenylurea**Final regulatory action has been taken for the category:** Pesticide.**Final regulatory action:** The chemical is banned.

Summary of the final regulatory action: The application for the renewal of the approval of the active substance pencycuron was withdrawn by industry from the approval process under Regulation (EC) No 1107/2009 concerning the placing of plant protection products on the market since the applicant has confirmed that he no longer supports the application for renewal of approval. Consequently, the approval of pencycuron expired on 31 May 2021. As a result, it is prohibited to place on the market or use plant protection products containing pencycuron because pencycuron is not approved as an active substance in accordance with Regulation (EC) No 1107/2009. Disposal, storage, placing on the market and use of existing stocks of plant protection products containing pencycuron is prohibited as of 1 June 2021.

Use or uses prohibited by the final regulatory action: All applications as a plant protection product.**Use or uses that remain allowed:** Not relevant**The final regulatory action was based on a risk or hazard evaluation:** No

Basis for the final regulatory action if other than hazard or risk evaluation: In the European Union, active substances for use in plant protection products are approved for a certain period in accordance with Regulation (EC) No 1107/2009. The active substance pencycuron had been approved under Regulation (EC) No 1107/2009. An application for the renewal of that approval was submitted, but the applicant has confirmed that he no longer supports the application for renewal of approval. Consequently, the approval expired on 31 May 2021, with the effect that the use of pencycuron is banned in the European Union.

Summary of known hazards and risks to human health: Not relevant**Expected effect of the final regulatory action in relation to human health:** Not relevant**Summary of known hazards and risks to the environment:** Not relevant**Expected effect of the final regulatory action in relation to the environment:** Not relevant

Additional information related to the chemical or the final regulatory action, if any: When reviewing the maximum residue limits for pencycuron, the European Food Safety Authority (EFSA) identified a concern due to presence of aniline (Muta 2, Carc 2) as metabolite in plants. In the absence of residue data for aniline, EFSA could not assess the animal exposure to this compound. However, considering that aniline might be present in raw agricultural feed items (in particular in leafy crops) and is likely to be formed under processing, it is expected that livestock are also exposed to this compound through their diet. Considering this remaining issue, the impact of the pesticide use of pencycuron on the residues in livestock was not fully addressed.

In addition, the studies on the nature of residues indicated that aniline, a highly toxic compound, may be formed when pencycuron is subject to processes including hydrolysis conditions and in minor extent in the leafy crop primary metabolism. All commodities assessed in this review are (or can be) consumed after processing. Therefore, it is highly expected that the pesticide uses of pencycuron lead to consumer exposure to aniline. Aniline is classified a Category 2 mutagen (H341, suspected of causing genetic defects) and as a Category 2 carcinogen (H351, suspected of causing cancer). Furthermore, it is considered as a carcinogen for which a genotoxic mechanism cannot be excluded, meaning that a risk to consumer cannot be excluded. In the absence of further residue data for aniline and toxicological reference values, and considering that the use of the Margin of Exposure approach is not recommended for considering the risk of genotoxic metabolites, EFSA was not in a position to fully assess or refine the consumer exposure to aniline due to the pesticide use of pencycuron. Thus, the impact of the pesticide use of pencycuron on the consumer dietary exposure was not addressed. This was deemed as a major uncertainty, which prevented EFSA from recommending any MRLs for pencycuron. Considering that all authorisations for plant protection products have been revoked and that some information was not available and that therefore a risk for consumers cannot be excluded, the maximum residue limits were

set at the limit of determination. European Food Safety Authority (2018). Review of the existing maximum residue levels for pencycuron according to Article 12 of Regulation (EC) No 396/2005. EFSA Journal 2018;16(12):5518, 43 pp. <https://doi.org/10.2903/j.efsa.2018.5518>

Date of entry into force of the final regulatory action: 31/05/2021

MONTENEGRO

Common Name(s): Aldrin **CAS number(s):** 309-00-2

Chemical Name: 1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1.alpha.,4.alpha.,4a.beta.,5.alpha.,8.alpha.,8a.beta.)-

Final regulatory action has been taken for the category: Pesticide.

Final regulatory action: The chemical is banned.

Summary of the final regulatory action: Aldrin is not entered in the list of registered chemicals in Montenegro, and is not on the list of active substances permitted for use in the plant protection for 2018.

Aldrin is also in Annex V which lists the chemicals and articles the use of which is prohibited in the European Union and which shall not be exported. This annex is transposed in Rulebook on list of dangerous chemicals and products which export is prohibited ("Official Gazette of Montenegro", No. 071/18).

Use or uses prohibited by the final regulatory action: All application as plant protection product.

The final regulatory action was based on a risk or hazard evaluation: No

Basis for the final regulatory action if other than hazard or risk evaluation: Harmonization Montenegro legislation with EU legislation, considering final report of sanco 2006 and concerns about:

- The toxicity of breakdown products,
- Potential carcinogenic properties of the active substance,
- High long term risk for insectivores birds,
- High acute risk to herbivores mammals,
- High acute and long term risk to aquatic organisms,

High risk for beneficial arthropods.

Additional information related to the chemical or the final regulatory action, if any: Montenegro has prohibited the use of Aldrin as a plant protection product to minimize the potential hazards of pesticides on human health and the environment, while encouraging integrated pest management and alternative approaches to safeguarding plants.

Date of entry into force of the final regulatory action: 04/10/2018

MOROCCO

Common Name(s): Lead chromates **CAS number(s):** 12656-85-8,
1344-37-2, 7758-97-6

Chemical Name: Dioxido(dioxo)chromium; lead(2+)

Final regulatory action has been taken for the category: Industrial.

Final regulatory action: The chemical is severely restricted.

Summary of the final regulatory action: The Ministerial Decree

On April 6, 2021, the Ministry of Industry issued the decree of the Ministry of Industry, Trade, Green and Digital Economy N°959-21 that made the application of the Moroccan Standard NM 03.3.318 (entitled Limit for Lead in Paint) mandatory. The decree is published in the Official Bulletin No. 6988,

On May 20, 2021, and it has been indicated that the Moroccan Standard is made available to interested parties at the Moroccan Institute of Standardization.

The Standard

Moroccan Standard NM 03.3.318 2020, entitled *Limit for Lead and its compounds in Paint*

- States that lead is a toxic metal whose generalized use has led to significant environmental pollution and numerous health problems around the world. Children are especially vulnerable to the neurotoxic effects of lead, and even a very low level of exposure can cause serious, or even irreversible, neurological damage. The main sources of human exposure to this heavy metal include lead paint.
- Has the Objective of limiting Lead and its compounds content in paint products.
- Defines the term “*Paint*” as a liquid coating material, in a paste or powder, which, applied onto a substrate, forms a layer having protective, decorative, and/or specific qualities. For purposes of the Standard, the term “*Paint*” includes varnishes, lacquers, dyes, enamels, glazed coatings, primers, and coatings, whatever use they may be intended for. And the Standard states that “*Paint is usually a mixture of resins, pigments, fillers, solvents, and other additives.*”
- Defines the term “*Total Lead Content*” as the percentage of lead in relation to the weight of the total non-volatile portion or the percentage of lead in relation to the weight of the dry paint film.
- Establishes a limit on the total Lead content in paint of 90 parts per million (PPM), determined according to the standard NM 03.3.022.

The Regulatory Action Severely Restricted the Use of Lead Chromates

Whenever lead chromates are intentionally used as pigments in paints, the concentration of lead compounds in the paint product will, almost always, be substantially greater than 1,000 ppm¹.

By prohibiting the manufacture and import of paints with a concentration of lead compounds greater than 90 ppm, Morocco’s mandatory Limit for Lead and its compounds in Paint effectively restricts the use of lead chromates as intentional ingredients in paints.

¹Toolkit for establishing laws to eliminate lead paint, Paint Basics, Module A-3; Page 14, 2021 Update, Global Alliance to Eliminate Lead paint.

<https://wedocs.unep.org/bitstream/handle/20.500.11822/37030/PAINT.pdf?sequence=3&isAllowed=y>

Use or uses prohibited by the final regulatory action: The mandatory Standard, NM 03.3.318 2020 (Limit for Lead in Paint) prohibits the use of lead chromates as intentional ingredients in paints, and effectively it prohibits the import and manufacture of paints that contain lead chromates as pigments.

Use or uses that remain allowed: All uses of lead chromates, other than those related to their use as pigments in paints remain allowed.

The final regulatory action was based on a risk or hazard evaluation: Yes

The reasons for the final regulatory action were relevant to: Human health

Summary of known hazards and risks to human health: Summary of the Risk Evaluation

The Moroccan Poison Control Centre (CAPM) is an institution under the Moroccan Ministry of Health and Social Protection. CAPM’s Toxicovigilance Department receives case reports of lead poisoning which have included reports of lead exposures in children who had been exposed to lead from lead paints in their homes. The analysis has concerned patients exposed through paints, and it is known that the lead compound used in paints is lead chromate, and the toxicity of lead chromates is linked to lead, and we aimed through this risk evaluation to assess lead exposure and therefore lead toxicity.

Furthermore, the Ministry of Health was aware that the World Health Organization (WHO) and other international organizations were encouraging governments to take regulatory actions to control lead and its compounds in paints. For these and other reasons, the CAPM took a renewed interest in topics relating to human lead exposures including exposures of children to lead from lead paints.

- In 2014, the CAPM's quarterly toxicology journal, *Toxicologie Maroc*, put out a special edition on heavy metal poisoning which, among other topics, addressed lead in paints and noted that lead exposures in children can result from their ingesting fragments of deteriorated lead paints.
- In 2016, CAPM has conducted an information and awareness-raising campaign and other activities with the following aims: measuring the magnitude of the impact of lead exposure on the Moroccan population; raising stakeholder lead exposure awareness; and evaluating the risk to human health in Morocco from exposures to lead from lead paints.
- In 2017 the CAPM, in collaboration with the Moroccan Society of Clinical and Analytic Toxicology (SMTCA), conducted a study on the lead content in paint sold in Morocco. The study found that nearly 40% of the paints that were tested exceeded the WHO-recommended maximum lead concentration of 90 parts per million (ppm) lead in the dry paint film.

CAPM – with support from SMTCA – then began a more systematic evaluation of the risk to human health in Morocco from lead in paints.

Toxicological Information

The evaluation considered toxicological information such as:

- Children under 6 years of age and pregnant women are particularly vulnerable to lead exposure.
- There is no known threshold level of lead exposure in young children below which neurological deficits do not occur.
- Exposure to even small amounts of lead can damage a young child's developing brain and cause lifelong, irreversible neurological impairments or deficits.
- Cohort studies have found that the neurological impairments or deficits resulting from lead exposure can lead to reduced intelligence (as measured by IQ tests), reduced academic performance (as measured by school grades and graduation rates), increased antisocial behaviour (as measured by incarceration rates), and reduced socioeconomic outcomes (as measured by lifetime earnings).
- When a significant number of a country's young children are exposed to lead (as measured by elevated blood lead levels), there is a cumulative (population-level) health effect that affects a country's economic performance.

Exposure-Related

Information

The assessment took into account exposure-related information such as:

- Painted surfaces weather, wear and deteriorate over time. When a surface has been painted with lead-based paint, lead-contaminated dust and paint fragments are released into the surrounding indoor and/or outdoor environment and can create lead hazards.
- Before repainting old painted surfaces, painters often sand or scrape the surface. This can also release lead-contaminated dust and paint fragments into the environment, creating a lead hazard.
- If a young child plays on the floor (or near ledges) in a home where household dust is contaminated with lead-based paint fragments, or if a young child plays outdoors in an area where the soil is contaminated with lead-based paint fragments, the child is likely to get some of this dust or dirt on his or her hands.
- Young children typically have normal hand-to-mouth behaviour and suck their fingers.
- If the dirt (and dust) on a young child's hands is contaminated with leaded paint fragments, the child will typically ingest lead through normal hand-to-mouth behaviour.
- Lead ingestion is often repeated over time (because young children often get their hands dirty and often put their dirty hands in their mouths).

The assessment also considered the experience of other countries, particularly the United States. Although the US banned lead-based paint for residential use in 1978, deteriorating lead-based paint and lead-contaminated house dust are still among the most prevalent sources of lead hazards and lead

exposure for young children in the US. And tens of millions of U.S. housing units still contain lead hazards from old lead-based paint.

This information and its supporting data – when adapted to Moroccan conditions – indicate that the anticipated future lead hazards and childhood lead exposures that would result from allowing the continued sale and use of lead paint in Morocco could be expected to result in increased future lead hazards and lead exposures for many future generations of Moroccan young children.

The conclusions that were drawn:

- Lead should be considered a significant non-threshold toxicant in young children (because there is no known threshold of lead exposure in young children below which neurological deficits do not occur; and because even low-dose exposures to lead can cause significant lifelong harm to a child's health and well-being).
- Government should take action to control and prevent significant sources of exposure to non-threshold toxicants where it is practically and socio-economically feasible to do so.
- As long as lead paint remains available for sale and use nationwide, the potential for lead exposure in young children will increase (surfaces in and around homes and schools will continue to be coated with lead paint).

Regulatory Action

Based on the risk assessment and its conclusions, CAPM and SMTCA sent notifications to the Moroccan Ministry of Industry (MoI) and the Moroccan Standards Institute (IMANOR) about the need to control the lead content of paints sold and used in Morocco. IMANOR set up a committee with representatives from the MoH, the MoI and Moroccan paint companies to study the matter further. IMANOR then promulgated the Moroccan regulatory standard (NM 03.3.318), which limited the maximum lead content of paints marketed in Morocco to 90 ppm.

The Ministry of Industry then issued a decree on 6 April 2021 (Decree of, Trade, Green and Digital Economy number 959-21) making the application of the Moroccan standard NM 03.3.318 (on lead limits in paints) mandatory.

Expected effect of the final regulatory action in relation to human health: The expected effect of the final regulatory action is reduced risk to human health, by the avoidance of the human exposures to lead from lead paints that would have occurred if the uncontrolled production and sales of lead paints had been allowed to continue.

Some of this expected effect will not occur immediately. There is usually a delay of several years between the time a surface is coated with a lead paint and the time that fragments of that lead paint accumulate in the surrounding dust and soil.

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

Alternatives to lead chromates that were available at the time of the Order, as well as the currently available alternatives includes:

Inorganic Pigments:

PY 184 – Bismuth Vanadate,

PY 53 & PBr 24 – both Mixed Metal Oxides, and

PY 42 & PR 101 – both Iron Oxides.

Organic Pigments:

PO 13, PO 34, PY 14, & PY 83 – Azo Diarylides,

PO 16 – Azo Dianisidine,

PO 36, PY 151, PY 154, & PY 194 – Azo Benzimidazolones,

PY 65, PY 74, & PY 97 – Monoazo, and

PO 67, PO 73, PY 110, PY 138, PY 189, and PR 254 – Others

References:

Clariant (2013). Environmental Friendly Coloration – Lead Free Pigment. https://www.saicm.org/portals/12/Documents/GEF-Project/Jakarta-WS/03_Clariant_IPEN.pdf

International Pollutants Elimination Network (2015). Replacement of lead pigments in solvent based decorative paints, Gothenburg, Sweden.

<https://ipen.org/sites/default/files/documents/Replacement%20of%20lead%20pigments%20in%20solvent%20based%20decorative%20paints.pdf>

International Pollutants Elimination Network (2015). Lead drier replacement in solvent based alkyd decorative paints, Gothenburg, Sweden.

<https://ipen.org/sites/default/files/documents/Lead%20drier%20replacement%20in%20solvent%20based%20alkyd%20decorative%20paints.pdf>

United Nations Environment Programme (2022). Lead Paint Reformulation

Technical Guidelines, Geneva, Switzerland.

<https://www.unep.org/resources/toolkits-manuals-and-guides/lead-paint-reformulation-technical-guidelines>

These guidelines were developed “to support the SME paint reformulation by providing guidance for lead paint reformulation and by showcasing some examples of lead paint reformulation in selected SMEs. They discuss the substitution process and how to identify and assess possible, non-lead alternatives, including how to assess their hazards and risks for human health and the environment.

The hazard of the alternatives are in general much lower than of lead chromates, with several alternatives not posing any hazard to human health or the environment.

Additional information related to the chemical or the final regulatory action, if any:**Production and Use of Lead Chromate-Based Pigments:**

Lead chromate occurs naturally in a mineral called crocoite. Crocoite is rare and costly. It is bought and sold by mineral traders and collectors, but it has no commercial uses other than as a collectors' item. Commercial-scale production of Lead Chromates did not become possible until the 1820s when accessible deposits of chromite (an ore containing FeCr_2O_4) were first discovered.

REF: Morrison, R. D., & Murphy, B. L. (2010). Environmental forensics: contaminant specific guide. Elsevier. <https://www.sciencedirect.com/book/9780125077514/environmental-forensics>

During the final quarter of the 20th century, high-income countries in North America, Western Europe, and other regions started adopting national regulatory controls to limit the lead content of paints. These regulatory decisions were driven by growing understanding and concerns about lead in paints and about the harms to human health that occur when children, workers, and others are exposed to lead from lead paints.

After that, lead chromate production and use declined in most high-income countries, and it became increasingly centred in low- and middle-income countries. This appears to be one of many reasons that the mean blood lead level in low- and middle-income countries is now 3.5 times higher than the mean blood lead level in high-income countries.

REF: Larsen, B., & Sánchez-Triana, E. (2023). Global health burden and cost of lead exposure in children and adults: a health impact and economic modelling analysis. *The Lancet Planetary Health*, 7(10), e831-e840. [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(23\)00166-3/fulltext?ref=assuma-o-controle-de-sua-saude.com](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(23)00166-3/fulltext?ref=assuma-o-controle-de-sua-saude.com)

Pigments are Essential Constituents in Paints

Paints are mixtures of three essential constituents: pigments, binders, and solvents.

Pigments give a paint its colour. They also give a paint some of its other key properties such as the ability to protect the underlying surface from corrosion and from degradation caused by ultraviolet radiation.

Binders bind pigment particles to one another and enable the pigments to adhere to the surface that is being coated.

Solvents are liquids into which a paint's pigments, its binders, and any additives are mixed. After the paint is applied to a surface, the solvents evaporate. The pigments, binders, and any other paint ingredients then become a dry paint film.

(Some paints also contain additives called driers. But driers are not among the essential ingredients all paints contain.)

Based on the Rotterdam Convention's Article 2 definition of the term "Chemical," the Convention should treat lead chromate-based pigments that are contained in a paint product as a substance in a mixture.

If the Rotterdam Convention agrees to list Lead Chromates in its Annex III, its Prior Informed Consent Procedure should apply not only to international trade in lead chromate-based pigments in their powder form, but it should also apply to lead chromate-based pigments when they are used as constituents in a paint product that is being internationally traded.

Date of entry into force of the final regulatory action: 20/05/2021

THAILAND

Common Name(s): Lindane ***CAS number(s):*** 58-89-9

Chemical Name: (1R,2S,3r,4R,5S,6r)-1,2,3,4,5,6-Hexachlorocyclohexane

Final regulatory action has been taken for the category: Pesticide.

Final regulatory action: The chemical is Banned.

Summary of the final regulatory action: Lindane or gamma-hexachlorocyclohexane or Y-HCH (CAS no.58-89-9) except the part on responsibility of Food and Drug administration, was classified as category 4 Hazardous substances of which the production, import, export or possession are prohibited, under the responsibility of Department of Agriculture.

Lindane or gamma-hexachlorocyclohexane or Y-HCH (CAS no.58-89-9) in products used in household or public health activity with purposes for inhibiting, preventing, controlling, destroying insects and other animals, except in medical product used as second line treatment for scabies and louse was classified as category 4 Hazardous substances of which the production, import, export or possession are prohibited, under the responsibility of Food and Drug Administration.

Use or uses prohibited by the final regulatory action: Detail can be found from the sources as mentioned in 2.2

Use or uses that remain allowed: N/A

The final regulatory action was based on a risk or hazard evaluation: Yes

The reasons for the final regulatory action were relevant to: Human health and environment

Summary of known hazards and risks to human health: Detail can be found from the sources as mentioned in 2.4.1

Expected effect of the final regulatory action in relation to human health: Protecting human health from using this chemical in products used in household or public health activity with purpose for inhibiting, preventing, controlling, destroying insect and other animal.

Summary of known hazards and risks to the environment: Detail can be found from the sources as mentioned in 2.4.1

Expected effect of the final regulatory action in relation to the environment: Reduce risk of toxicity to aquatic life and with long lasting effects.

Information on alternatives and their relative risks, e.g. IPM, chemical and non-chemical alternatives: Relevant information from The Risk Management Evaluation document

(UNEP/POPS/POPRC.3/20/Add.4), prepared by the POPRC under the Stockholm Convention was used during the national regulation process.

Date of entry into force of the final regulatory action: 28/09/2013

VENEZUELA (BOLIVARIAN REPUBLIC OF)

Common Name(s): Ethylene oxide **CAS number(s):** 75-21-8

Chemical Name: Oxirane

Final regulatory action has been taken for the category: Pesticide.

Final regulatory action: The chemical is severely restricted.

Summary of the final regulatory action: Legislative or administrative measures: Bolivarian Republic of Venezuela, Ministry of People's Power for Planning and Finance, through the National Integrated Service of Customs and Tax Administration, G.O. N°. 6,097, Decree N°. 9,430, 03/19/2013. Art. 1. In order to classify goods according to the tariff, the Common Customs Tariff Nomenclature of the MERCOSUR Member States (NCM) is adopted, based on the Harmonized System of Designation and Coding of Merchandise (HS) of the Customs Cooperation Council (C.C.A).

The import of Ethylene oxide is found in the Common Customs Tariff under tariff code No. 2910.10.00.00, according to Decree 4,944, relative to Customs Tariffs of 04-24-2024, published in Official Gazette N°. 6,804 04-25-2024, where in article 21 on the Legal Regime applicable to the import or export of merchandise under Note 10 is established, being the Ministry of Popular Power for Ecosocialism the entity in charge of establishing the requirements for the import according to article 27 of Decree N°. 2,635 on the "Standards for the Control of the Recovery of Hazardous Materials and the Management of Hazardous Waste" of 22 July 22 1998, published in the Official Gazette of the Republic of Venezuela No 5,245. Extraordinary dated 3 August 1998, for which this institution, once the requirements have been met and the technical inspection has been carried out by the General Directorate of Environmental Quality Management, which grants the import or export authorization, with a validity of one fiscal year according to the industrial chemical product or pesticide where the quantities, country of origin and use that will have in the country are reflected.

In Venezuela, Ethylene oxide is used in the pharmaceutical sector for the sterilization of medical supplies and equipment. This product is in the pesticide category. Its capacity for chemical reaction makes it widely used as an intermediate product in the chemical industry and as an effective pesticide, according to the Decision Guidance Document, Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, Rome - Geneva, February 2001.

The final regulatory action was based on a risk or hazard evaluation: Yes

The reasons for the final regulatory action were relevant to: Human health

Summary of known hazards and risks to human health: Health problems due to inhalation, poisoning due to high exposures, and carcinogenic effects.

Expected effect of the final regulatory action in relation to human health: Regulations for the correct handling in the storage, transportation, and use of Ethylene oxide in sterilization activities in order to reduce the risks due to exposures.

Date of entry into force of the final regulatory action: 24/04/2024

Synopsis of notifications of final regulatory action received since the last PIC Circular

PART B**NOTIFICATIONS OF FINAL REGULATORY ACTION THAT HAVE BEEN VERIFIED AS NOT CONTAINING ALL THE INFORMATION REQUIRED BY ANNEX I TO THE CONVENTION**

Chemical name	CAS No.	Category	Party	Region	Annex III
Alpha-hexachlorocyclohexane	319-84-6	Industrial	China	Asia	No
Beta-hexachlorocyclohexane	319-85-7	Industrial	China	Asia	No
Chlordecone	143-50-0	Industrial	China	Asia	No
Chlordane	57-74-9	Industrial	China	Asia	No
DDT	50-29-3	Industrial	China	Asia	No
Decabromodiphenyl ether	1163-19-5	Industrial	China	Asia	Yes
Dechlorane Plus	13560-89-9 135821-03-3 135821-74-8	Industrial	China	Asia	No
Dicofol	115-32-2 10606-46-9	Industrial	China	Asia	No
Endosulfan and its related isomers	115-29-7 959-98-8 33213-65-9 1031-07-8	Industrial	China	Asia	No
Hexabromocyclododecane	25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8	Industrial	China	Asia	Yes
Hexachlorobutadiene	87-68-3	Industrial	China	Asia	No
Mirex	2385-85-5	Industrial	China	Asia	No
Perfluorooctanoic acid (PFOA), its salts and PFOA related compounds		Industrial	China	Asia	Yes
Pentachlorophenol and its salts and esters	87-86-5 131-52-2 27735-64-4 3772-94-9 1825-21-4	Industrial	China	Asia	No
Pentachlorobenzene	608-93-5	Industrial	China	Asia	No
Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds		Industrial	China	Asia	No
Perfluorooctane sulfonic acid, its salts, and perfluorooctane sulfonyl fluoride	1763-23-1 307-35-7 2795-39-3 29457-72-5 29081-56-9 70225-14-8 56773-42-3 251099-16-8	Industrial	China	Asia	Yes

Chemical name	CAS No.	Category	Party	Region	Annex III
Polychlorinated biphenyls (PCB)		Industrial	China	Asia	Yes
Polychlorinated naphthalenes		Industrial	China	Asia	No
Prochloraz	67747-09-5	Pesticide	European Union	Europe	No
Short-chain chlorinated paraffins	85535-84-8 68920-70-7 71011-12-6 85536-22-7 85681-73-8 108171-26-2	Industrial	China	Asia	Yes

PART C

NOTIFICATIONS OF FINAL REGULATORY ACTION STILL UNDER VERIFICATION

Chemical name	CAS No.	Category	Party	Region	Annex III
Amitraz	33089-61-1	Pesticide	Kuwait	Near East	No
Benomyl	17804-35-2	Pesticide	Kuwait	Near East	No
Carbendazim	10605-21-7	Pesticide	Kuwait	Near East	No
Carbosulfan	55285-14-8	Pesticide	Kuwait	Near East	No
Chlorfenapyr	122453-73-0	Pesticide	Kuwait	Near East	No
Chlordecone		Pesticide	Saudi Arabia	Near East	No
Fenobucarb	3766-81-2	Pesticide	Kuwait	Near East	No
Fenvalerate	51630-58-1	Pesticide	Kuwait	Near East	No
Formaldehyde	50-00-0	Pesticide	Thailand	Asia	No
Hexythiazox	78587-05-0	Pesticide	Kuwait	Near East	No
Iminoctadine triacetate	57520-17-9	Pesticide	Kuwait	Near East	No
Kresoxim-methyl	143390-89-0	Pesticide	Kuwait	Near East	No
Malathion	121-75-5	Pesticide	Kuwait	Near East	No
Methidathion	950-37-8	Pesticide	Kuwait	Near East	No
Methomyl	16752-77-5	Pesticide	Thailand	Asia	No
Methyl bromide	74-83-9	Pesticide	Kuwait	Near East	No
Oxadiazon	19666-30-9	Pesticide	Kuwait	Near East	No
Oxyfluorfen	42874-03-3	Pesticide	Kuwait	Near East	No
Permethrin	52845-53-1	Pesticide	Kuwait	Near East	No
Phenthoate	2597-03-7	Pesticide	Kuwait	Near East	No
Spirodiclofen	148477-71-8	Pesticide	Kuwait	Near East	No
Tau-fluvalinate	102851-08-9	Pesticide	Kuwait	Near East	No
Terbufos	13071-79-9	Pesticide	Kenya	Africa	Yes
Thiophanate methyl	23564-05-8	Pesticide	Kuwait	Near East	No

APPENDIX II

**PROPOSALS FOR INCLUSION OF SEVERELY HAZARDOUS PESTICIDE
FORMULATIONS IN THE PIC PROCEDURE**

PART A

**SUMMARY OF EACH PROPOSAL FOR INCLUSION OF A SEVERELY
HAZARDOUS PESTICIDE FORMULATION THAT HAS BEEN VERIFIED TO
CONTAIN ALL INFORMATION REQUESTED BY PART 1 OF ANNEX IV TO THE
CONVENTION**

None.

PART B

**PROPOSALS FOR INCLUSION OF SEVERELY HAZARDOUS PESTICIDE
FORMULATIONS STILL UNDER VERIFICATION**

None.

APPENDIX III
CHEMICALS SUBJECT TO THE PIC PROCEDURE

Chemical name	CAS No.	Category	Date of first dispatch of decision guidance document
2,4,5-T and its salts and esters	93-76-5 ¹	Pesticide	Prior to adoption of the Convention
Alachlor	15972-60-8	Pesticide	24 October 2011
Aldicarb	116-06-3	Pesticide	24 October 2011
Aldrin	309-00-2	Pesticide	Prior to adoption of the Convention
Azinphos-methyl	86-50-0	Pesticide	10 August 2013
Binapacryl	485-31-4	Pesticide	1 February 2005
Captafol	2425-06-1	Pesticide	Prior to adoption of the Convention
Carbofuran	1563-66-2	Pesticide	15 September 2017
Chlordane	57-74-9	Pesticide	Prior to adoption of the Convention
Chlordimeform	6164-98-3	Pesticide	Prior to adoption of the Convention
Chlorobenzilate	510-15-6	Pesticide	Prior to adoption of the Convention
DDT	50-29-3	Pesticide	Prior to adoption of the Convention
Dieldrin	60-57-1	Pesticide	Prior to adoption of the Convention
Dinitro- <i>ortho</i> -cresol (DNOC) and its salts (such as ammonium salt, potassium salt and sodium salt)	534-52-1 2980-64-5 5787-96-2 2312-76-7	Pesticide	1 February 2005
Dinoseb and its salts and esters	88-85-7 ¹	Pesticide	Prior to adoption of the Convention
1,2-Dibromoethane (EDB)	106-93-4	Pesticide	Prior to adoption of the Convention
Endosulfan	115-29-7	Pesticide	24 October 2011
Ethylene dichloride	107-06-2	Pesticide	1 February 2005
Ethylene oxide	75-21-8	Pesticide	1 February 2005
Fluoroacetamide	640-19-7	Pesticide	Prior to adoption of the Convention
HCH (mixed isomers)	608-73-1	Pesticide	Prior to adoption of the Convention
Heptachlor	76-44-8	Pesticide	Prior to adoption of the Convention
Hexachlorobenzene	118-74-1	Pesticide	Prior to adoption of the Convention
Lindane	58-89-9	Pesticide	Prior to adoption of the Convention
Mercury compounds, including inorganic mercury compounds, alkyl mercury compounds and alkyloxyalkyl and aryl mercury compounds		Pesticide	Prior to adoption of the Convention
Methamidophos	10265-92-6	Pesticide	15 September 2015 ²
Monocrotophos	6923-22-4	Pesticide	1 February 2005

Chemical name	CAS No.	Category	Date of first dispatch of decision guidance document
Parathion	56-38-2	Pesticide	1 February 2005
Pentachlorophenol and its salts and esters	87-86-5 ¹	Pesticide	Prior to adoption of the Convention
Phorate	298-02-2	Pesticide	16 September 2019
Terbufos	13071-79-9	Pesticide	22 October 2023
Toxaphene	8001-35-2	Pesticide	1 February 2005
All tributyltin compounds including: - Tributyltin oxide - Tributyltin fluoride - Tributyltin methacrylate - Tributyltin benzoate - Tributyltin chloride - Tributyltin linoleate - Tributyltin naphthenate	56-35-9 1983-10-4 2155-70-6 4342-36-3 1461-22-9 24124-25-2 85409-17-2	Pesticide	1 February 2009 ³
Trichlorfon	52-68-6	Pesticide	15 September 2017
Dustable powder formulations containing a combination of: - Benomyl at or above 7%, - Carbofuran at or above 10%, - Thiram at or above 15%	17804-35-2 1563-66-2 137-26-8	Severely hazardous pesticide formulation	1 February 2005
Phosphamidon (soluble liquid formulations of the substance that exceed 1000 g active ingredient/L)	13171-21-6 (mixture, (E)&(Z) isomers) 23783-98-4 ((Z)-isomer) 297-99-4 ((E)-isomer)	Severely hazardous pesticide formulation	Prior to adoption of the Convention
Methyl-parathion (emulsifiable concentrates (EC) at or above 19.5% active ingredient and dusts at or above 1.5% active ingredient)	298-00-0	Severely hazardous pesticide formulation	Prior to adoption of the Convention
Asbestos: - Actinolite - Anthophyllite - Amosite - Crocidolite - Tremolite	77536-66-4 77536-67-5 12172-73-5 12001-28-4 77536-68-6	Industrial	1 February 2005 1 February 2005 1 February 2005 Prior to adoption of the Convention 1 February 2005
Commercial octabromodiphenyl ether including: - Hexabromodiphenyl ether - Heptabromodiphenyl ether	36483-60-0 68928-80-3	Industrial	10 August 2013
Commercial pentabromodiphenyl ether including: - Tetrabromodiphenyl ether - Pentabromodiphenyl ether	40088-47-9 32534-81-9	Industrial	10 August 2013
Decabromodiphenyl ether	1163-19-5	Industrial	21 October 2022
Hexabromocyclododecane	25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8	Industrial	16 September 2019

Chemical name	CAS No.	Category	Date of first dispatch of decision guidance document
Perfluorooctane sulfonic acid, perfluorooctane sulfonates, perfluorooctane sulfonamides and perfluorooctane sulfonyls including: - Perfluorooctane sulfonic acid - Potassium perfluorooctane sulfonate - Lithium perfluorooctane sulfonate - Ammonium perfluorooctane sulfonate - Diethanolammonium perfluorooctane sulfonate - Tetraethylammonium perfluorooctane sulfonate - Didecyldimethylammonium perfluorooctane sulfonate - <i>N</i> -Ethylperfluorooctane sulfonamide - <i>N</i> -Methylperfluorooctane sulfonamide - <i>N</i> -Ethyl- <i>N</i> -(2-hydroxyethyl) perfluorooctane sulfonamide - <i>N</i> -(2-Hydroxyethyl)- <i>N</i> -methylperfluorooctane sulfonamide - Perfluorooctane sulfonyl fluoride	1763-23-1 2795-39-3 29457-72-5 29081-56-9 70225-14-8 56773-42-3 251099-16-8 4151-50-2 31506-32-8 1691-99-2 24448-09-7 307-35-7	Industrial	10 August 2013
Perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds ⁴	335-67-1	Industrial	21 October 2022
Polybrominated biphenyls (PBB)	36355-01-8 (hexa-) 27858-07-7 (octa-) 13654-09-6 (deca-)	Industrial	Prior to adoption of the Convention
Polychlorinated biphenyls (PCB)	1336-36-3	Industrial	Prior to adoption of the Convention
Polychlorinated terphenyls (PCT)	61788-33-8	Industrial	Prior to adoption of the Convention
Short-chain chlorinated paraffins	85535-84-8	Industrial	15 September 2017
Tetraethyl lead	78-00-2	Industrial	1 February 2005
Tetramethyl lead	75-74-1	Industrial	1 February 2005
All tributyltin compounds including: - Tributyltin oxide - Tributyltin fluoride - Tributyltin methacrylate - Tributyltin benzoate - Tributyltin chloride - Tributyltin linoleate - Tributyltin naphthenate	56-35-9 1983-10-4 2155-70-6 4342-36-3 1461-22-9 24124-25-2 85409-17-2	Industrial	15 September 2017 ⁵
Tris(2,3-dibromopropyl) phosphate	126-72-7	Industrial	Prior to adoption of the Convention

Notes:

1. Only the CAS numbers of parent compounds are listed. For a list of other relevant CAS numbers, reference may be made to the relevant decision guidance document.
2. The date relates to the date for the communication of the decision guidance document for the chemical currently included in Annex III and adopted by decision RC-7/4, which amended Annex III to list methamidophos and deleted a previous entry in Annex III for “methamidophos (soluble liquid formulations of the substance that exceed 600 g active ingredient/L)”.
3. See the related entry for all tributyltin compounds within the industrial category. Tributyltin compounds were initially listed within the pesticide category by decision RC-4/5 and the initial decision guidance document communicated to Parties related solely to the pesticide category. Decision RC-8/5 subsequently amended Annex III to list all tributyltin compounds also in the industrial category, with the amendment entering into force on 15 September 2017. A revised decision guidance document was also approved (see note 5).
4. The following substances are included in this designation:
 - Perfluorooctanoic acid (PFOA) and its salts;
 - Any related substance (including its salts and polymers) having a linear or branched perfluoroheptyl group with the formula C_7F_{15} - directly attached to another carbon atom as one of the structural elements; and
 - Any related substance (including its salts and polymers) having a linear or branched perfluorooctyl group with the formula C_8F_{17} - as one of the structural elements.

The following substances are excluded from this designation:

- C_8F_{17} -X, where X = F, Cl, Br;
 - C_8F_{17} -C(=O)OH, C_8F_{17} -C(=O)O-X' or C_8F_{17} -CF₂-X' (where X' = any group, including salts); and,
 - Perfluorooctane sulfonic acid (PFOS) and its derivatives ($C_8F_{17}SO_2X$ (X = OH, metal salt (O-M⁺), halide, amide and other derivatives including polymers)).
5. This entry refers to the date for communication of the revised decision guidance document for tributyltin compounds, which relates to both the pesticide and industrial categories, which was approved by decision RC-8/5.

APPENDIX IV**LISTING OF ALL IMPORT RESPONSES RECEIVED FROM PARTIES AND
CASES OF FAILURE TO SUBMIT RESPONSES**

All import responses received from Parties and cases of failure to submit responses are available on the Convention website: <http://www.pic.int/tabid/1370/language/en-US/Default.aspx>.

The online database is presented with four tabs:

1. Import responses recently transmitted;
2. Import responses by Party;
3. Import responses by Chemical; and
4. Cases of failure to submit responses.

The import responses received since the last PIC Circular (between 1 May 2024 and 31 October 2024) may be viewed under the first tab “Import responses recently transmitted”. The overview of those import responses is available in this appendix.

All import responses, including latest and previously transmitted information, may be viewed under the second tab “Import responses by Party” or the third tab “Import responses by Chemical”.

The cases of failure to submit responses are available under the fourth tab “Cases of failure to submit responses”. It also includes the date on which the Secretariat first informed all Parties, through publication in the PIC Circular, of cases of failure to transmit a response.

OVERVIEW OF NEW IMPORT RESPONSES RECEIVED SINCE THE LAST PIC CIRCULAR

Pesticides

2,4,5-T and its salts and esters

Nicaragua

Alachlor

South Africa

Azinphos-methyl

Pakistan

South Africa

Venezuela (Bolivarian Republic of)

Carbofuran

Nicaragua

Pakistan

South Africa

Mercury compounds, including inorganic mercury compounds, alkyl mercury compounds and alkyloxyalkyl and aryl mercury compounds

Eswatini

Methamidophos

Nicaragua

South Africa

Methyl-parathion (Emulsifiable concentrates (EC) at or above 19.5% active ingredient and dusts at or above 1.5% active ingredient)

Türkiye

Phorate

Eswatini

Jamaica

Nicaragua

Pakistan

South Africa

Terbufos

Botswana

Brazil

Ecuador

Eswatini

European Union

Japan

Kenya

Montenegro

North Macedonia

Panama

Russian Federation

Saudi Arabia

Serbia

Singapore

South Africa

Switzerland

Thailand

Tributyl tin compounds

Eswatini

South Africa

Türkiye

Trichlorfon

Pakistan

South Africa

Industrial Chemicals

Actinolite asbestos

Botswana¹

Saudi Arabia

Amosite asbestos

Botswana¹

Saudi Arabia

Anthophyllite asbestos

Botswana¹

Saudi Arabia

Commercial octabromodiphenyl ether (including hexabromodiphenyl ether and heptabromodiphenyl ether)

Botswana¹

Saudi Arabia

South Africa

Commercial pentabromodiphenyl ether (including tetrabromodiphenyl ether and pentabromodiphenyl ether)

Botswana¹

Saudi Arabia

South Africa

Crocidolite asbestos

Botswana¹

Saudi Arabia

Decabromodiphenyl ether

Eswatini

Japan
 Russian Federation
 Saudi Arabia
 Türkiye

Hexabromocyclododecane

Botswana
 Eswatini
 Saudi Arabia

**Perfluorooctane sulfonic acid,
 perfluorooctane sulfonates,
 perfluorooctane sulfonamides and
 perfluorooctane sulfonyls**

Botswana
 Saudi Arabia
 Venezuela (Bolivarian Republic of)

**Perfluorooctanoic acid (PFOA), its salts
 and PFOA-related compounds**

Eswatini
 Japan
 Russian Federation
 Saudi Arabia
 South Africa

Türkiye

Polybrominated Biphenyls (PBBs)

Saudi Arabia

Polychlorinated Biphenyls (PCBs)

Saudi Arabia

Polychlorinated Terphenyls (PCTs)

Saudi Arabia

Short-chain chlorinated paraffins

Eswatini
 Saudi Arabia

Tremolite asbestos

Botswana¹
 Saudi Arabia

Tributyltin compounds

Botswana¹
 Eswatini
 Nicaragua
 South Africa

Tris(2,3-dibromopropyl) phosphate

Botswana

Notes:

1. A revision to the import response published in PIC Circular LVII (June 2023).

APPENDIX V**NOTIFICATIONS OF FINAL REGULATORY ACTION
FOR CHEMICALS NOT LISTED IN ANNEX III**

This appendix consists of two parts:

Part A: Notifications of final regulatory action for chemicals not listed in Annex III and verified as containing all the information required by Annex I to the Convention

The table lists all the notifications received during the interim PIC procedure and the current PIC procedure (September 1998 to 31 October 2024) verified as containing all the information required by Annex I to the Convention.

Part B: Notifications of final regulatory action for chemicals not listed in Annex III and verified as not containing all the information required by Annex I to the Convention

The table lists all the notifications received during the interim PIC procedure and the current PIC procedure (September 1998 to 31 October 2024) verified as not containing all the information required by Annex I to the Convention.

The information is also available on the Convention website.²⁰

²⁰ www.pic.int/tabid/1368/language/en-US/Default.aspx.

Notifications of final regulatory action for chemicals not listed in Annex III**PART A****NOTIFICATIONS OF FINAL REGULATORY ACTION FOR CHEMICALS NOT LISTED IN ANNEX III AND VERIFIED AS CONTAINING ALL THE INFORMATION REQUIRED BY ANNEX I TO THE CONVENTION**

Chemical name	CAS No.	Category	Party	Region	PIC Circular
1,1,1,2-Tetrachloroethane	630-20-6	Industrial	Latvia	Europe	XX
1,1,1,2-Tetrachloroethane	630-20-6	Industrial	Türkiye	Europe	LIII
1,1,1-Trichloroethane	71-55-6	Industrial	Latvia	Europe	XX
1,1,2,2-Tetrachloroethane	79-34-5	Industrial	Latvia	Europe	XX
1,1,2,2-Tetrachloroethane	79-34-5	Industrial	Türkiye	Europe	LIII
1,1,2-Trichloroethane	79-00-5	Industrial	Latvia	Europe	XX
1,1,2-Trichloroethane	79-00-5	Industrial	Türkiye	Europe	LIII
1,1-Dichloroethylene	75-35-4	Industrial	Latvia	Europe	XX
1,1-Dichloroethylene	75-35-4	Industrial	Türkiye	Europe	LIII
1,3-Dichloropropene	542-75-6	Pesticide	European Union	Europe	XXXVI
1,3-Dichloropropene	542-75-6	Pesticide	Serbia	Europe	LII
1,3-Dichloropropene	542-75-6	Pesticide	Türkiye	Europe	LVII
2,3,4,5-bis(2-butylene)tetrahydro-2-furaldehyde (MGK Repellent, MGK-R11)	126-15-8	Pesticide	Canada	North America	XXII
2,4,5-TP (Silvex; Fenoprop)	93-72-1	Pesticide	Thailand	Asia	XIV
2,4,6-Tri- <i>tert</i> -butylphenol	732-26-3	Industrial	Japan	Asia	XXI
2,4-D-dimethylammonium	2008-39-1	Pesticide	Mozambique	Africa	LII
2-Ethyl-1,3-hexanediol	94-96-2	Pesticide	Thailand	Asia	XX
2-naphthoxyacetic acid (2-NOA)	120-23-0	Pesticide	European Union	Europe	LIX
2-Naphthoxyacetic acid	120-23-0	Pesticide	Türkiye	Europe	LIII
2-Naphthylamine	91-59-8	Industrial	Japan	Asia	XXI
2-Naphthylamine	91-59-8	Industrial	Republic of Korea	Asia	XX
2-Naphthylamine	91-59-8	Industrial	Latvia	Europe	XX
2-Naphthylamine	91-59-8	Industrial	Switzerland	Europe	XXIII
2-Naphthylamine	91-59-8	Industrial	Türkiye	Europe	LIII
2-Nitrobenzaldehyde	552-89-6	Industrial	Latvia	Europe	XX
2-Propen-1-ol, reaction products with pentafluoroiodoethane tetrafluoroethylene telomer, dehydroiodinated, reaction products with epichlorohydrin and triethylenetetramine	464178-90-3	Industrial	Canada	North America	XLI
2-Propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with butyl 2-propenoate and 2,5 furandione, gamma-omega-perfluoro-C ₈₋₁₄ -alkyl esters, <i>tert</i> -Bu benzenecarboxperoxoate-initiated	459415-06-6	Industrial	Canada	North America	XLI

Chemical name	CAS No.	Category	Party	Region	PIC Circular
2-Propenoic acid, 2-methyl-, hexadecyl ester, polymers with 2-hydroxyethyl methacrylate, gamma-omega-perfluoro-C ₁₀₋₁₆ -alkyl acrylate and stearyl methacrylate	203743-03-7	Industrial	Canada	North America	XLI
4-Aminobiphenyl	92-67-1	Industrial	Republic of Korea	Asia	XX
4-Aminobiphenyl	92-67-1	Industrial	Japan	Asia	XXI
4-Aminobiphenyl	92-67-1	Industrial	Latvia	Europe	XX
4-Aminobiphenyl	92-67-1	Industrial	Switzerland	Europe	XXIII
4-Aminobiphenyl	92-67-1	Industrial	Türkiye	Europe	LIII
4-Chlorophenoxyacetic acid	122-88-3	Pesticide	Türkiye	Europe	LIII
4-Nitrobiphenyl	92-93-3	Industrial	Japan	Asia	XXI
4-Nitrobiphenyl	92-93-3	Industrial	Latvia	Europe	XX
4-Nitrobiphenyl	92-93-3	Industrial	Switzerland	Europe	XXIII
4-Nitrobiphenyl	92-93-3	Industrial	Türkiye	Europe	LIII
5- <i>tert</i> -Butyl-2,4,6-trinitro- <i>m</i> -xylene (Musk xylene)	81-15-2	Industrial	European Union	Europe	LV
Acephate	30560-19-1	Pesticide	Bosnia and Herzegovina	Europe	LIII
Acephate	30560-19-1	Pesticide	European Union	Europe	XVIII
Acephate	30560-19-1	Pesticide	Serbia	Europe	LII
Acephate	30560-19-1	Pesticide	Türkiye	Europe	LIII
Acetochlor	34256-82-1	Pesticide	Burkina Faso	Africa	XLV
Acetochlor	34256-82-1	Pesticide	Cabo Verde	Africa	XLV
Acetochlor	34256-82-1	Pesticide	Chad	Africa	XLV
Acetochlor	34256-82-1	Pesticide	Gambia	Africa	XLV
Acetochlor	34256-82-1	Pesticide	Guinea-Bissau	Africa	XLV
Acetochlor	34256-82-1	Pesticide	Mali	Africa	XLV
Acetochlor	34256-82-1	Pesticide	Mauritania	Africa	XLV
Acetochlor	34256-82-1	Pesticide	Niger	Africa	XLV
Acetochlor	34256-82-1	Pesticide	Senegal	Africa	XLV
Acetochlor	34256-82-1	Pesticide	Togo	Africa	XLV
Acetochlor	34256-82-1	Pesticide	Bosnia and Herzegovina	Europe	XLIX
Acetochlor	34256-82-1	Pesticide	European Union	Europe	XLV
Acetochlor	34256-82-1	Pesticide	Serbia	Europe	LII
Acetochlor	34256-82-1	Pesticide	Türkiye	Europe	LIII
Allyl alcohol	107-18-6	Pesticide	Canada	North America	XXII
Alpha hexachlorocyclohexane	319-84-6	Pesticide	China	Asia	XLV
Alpha hexachlorocyclohexane	319-84-6	Industrial	Japan	Asia	XXXII
Alpha hexachlorocyclohexane	319-84-6	Pesticide	Japan	Asia	XXXIII
Aluminium phosphide	20859-73-8	Pesticide & Industrial	Japan	Asia	XX
Amitraz	33089-61-1	Pesticide	Iran (Islamic Republic of)	Asia	XXX
Amitraz	33089-61-1	Pesticide	Bosnia and Herzegovina	Europe	LII
Amitraz	33089-61-1	Pesticide	European Union	Europe	XXI
Amitraz	33089-61-1	Pesticide	Serbia	Europe	LIX
Amitraz	33089-61-1	Pesticide	Türkiye	Europe	LIII
Amitraz	33089-61-1	Pesticide	Syrian Arab Republic	Near East	XXXII
Amitrole	61-82-5	Pesticide	Thailand	Asia	XX
Amitrole	61-82-5	Pesticide	European Union	Europe	XLIX

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Amitrole	61-82-5	Pesticide	Ecuador	Latin America and the Caribbean	LII
Ammonium hydrogen sulfide	12124-99-1	Industrial	Latvia	Europe	XX
Ammonium hydrogen sulfide	12124-99-1	Industrial	Türkiye	Europe	LIII
Ammonium polysulfide	9080-17-5	Industrial	Latvia	Europe	XX
Ammonium thiocyanate	1762-95-4	Pesticide	Türkiye	Europe	LIII
Anilofos	64249-01-0	Pesticide	Türkiye	Europe	LIII
Anthracene oil	90640-80-5	Industrial	Latvia	Europe	XX
Aramite	140-57-8	Pesticide	Thailand	Asia	XIV
Arsenic compounds	7440-38-2	Industrial	Latvia	Europe	XX
Atrazine	1912-24-9	Pesticide	Cabo Verde	Africa	XLI
Atrazine	1912-24-9	Pesticide	Chad	Africa	XLI
Atrazine	1912-24-9	Pesticide	Gambia	Africa	XLI
Atrazine	1912-24-9	Pesticide	Mauritania	Africa	XLI
Atrazine	1912-24-9	Pesticide	Niger	Africa	XLI
Atrazine	1912-24-9	Pesticide	Senegal	Africa	XLI
Atrazine	1912-24-9	Pesticide	Togo	Africa	XLI
Atrazine	1912-24-9	Pesticide	Bosnia and Herzegovina	Europe	LIII
Atrazine	1912-24-9	Pesticide	European Union	Europe	XXI
Atrazine	1912-24-9	Pesticide	Türkiye	Europe	LIII
Atrazine	1912-24-9	Pesticide	Uruguay	Latin America and the Caribbean	L
Azinphos-ethyl	2642-71-9	Pesticide	Iran (Islamic Republic of)	Asia	XLVI
Azinphos-ethyl	2642-71-9	Pesticide	Thailand	Asia	XIV
Azinphos-ethyl	2642-71-9	Pesticide	Türkiye	Europe	LIII
Azocyclotin	41083-11-8	Pesticide	Türkiye	Europe	LIII
Benalaxyl	71626-11-4	Pesticide	European Union	Europe	LVII
Benfuracarb	82560-54-1	Pesticide	Bosnia and Herzegovina	Europe	LIII
Benfuracarb	82560-54-1	Pesticide	European Union	Europe	XXXV
Benfuracarb	82560-54-1	Pesticide	Serbia	Europe	LII
Benfuracarb	82560-54-1	Pesticide	Türkiye	Europe	LIII
Bentazon	25057-89-0	Pesticide	Norway	Europe	XIII
Benzene	71-43-2	Industrial	Latvia	Europe	XX
Benzene	71-43-2	Industrial	Türkiye	Europe	LIII
Benzidine	92-87-5	Industrial	Republic of Korea	Asia	XX
Benzidine	92-87-5	Industrial	Latvia	Europe	XX
Benzidine	92-87-5	Industrial	Jordan	Near East	XLII
Benzidine	92-87-5	Industrial	Canada	North America	XXI
Benzidine	92-87-5	Industrial	Canada	North America	XXVIII
Benzidine and its salts	92-87-5	Industrial	India	Asia	XX
Benzidine and its salts	92-87-5	Industrial	Japan	Asia	XXI
Benzidine and its salts	92-87-5	Industrial	Switzerland	Europe	XXIII
Benzidine, its salts and benzidine derivatives	92-87-5 21136-70-9 36341-27-2 531-85-1 531-86-2 (list is not exhaustive)	Industrial	Türkiye	Europe	LIII
Benzidine and its salts	92-87-5	Industrial	Jordan	Near East	XVIII

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Benzyl butyl phthalate	85-68-7	Industrial	European Union	Europe	LV
Benzyl butyl phthalate	85-68-7	Industrial	Türkiye	Europe	LIII
Beta-cyfluthrin	1820573-27-0	Pesticide	European Union	Europe	LIX
Beta cypermethrin	65731-84-2	Pesticide	Bosnia and Herzegovina	Europe	LIII
Beta cypermethrin	65731-84-2	Pesticide	European Union	Europe	L
Beta hexachlorocyclohexane	319-85-7	Pesticide	China	Asia	XLV
Beta hexachlorocyclohexane	319-85-7	Industrial	Japan	Asia	XXXII
Beta hexachlorocyclohexane	319-85-7	Pesticide	Japan	Asia	XXXIII
Beta hexachlorocyclohexane	319-85-7	Pesticide	Thailand	Asia	XX
Bifenthrin	82657-04-3	Pesticide	Netherlands (Kingdom of the)	Europe	XIV
Bis(2-chloroethyl)ether	111-44-4	Industrial	Republic of Korea	Asia	XX
Bis(chloromethyl)ether	542-88-1	Industrial	Japan	Asia	XXI
Bis(chloromethyl)ether	542-88-1	Industrial	Republic of Korea	Asia	XX
Bis(chloromethyl)ether	542-88-1	Industrial	Canada	North America	XII
Bitertanol	55179-31-2	Pesticide	Norway	Europe	XXXV
Bitertanol	55179-31-2	Pesticide	Türkiye	Europe	LIII
Brodifacoum	56073-10-0	Pesticide	Türkiye	Europe	LIV
Bromacil	314-40-9	Pesticide	Türkiye	Europe	LIV
Bromacil	314-40-9	Pesticide	Costa Rica	Latin America and the Caribbean	LII
Bromobenzylbromotoluene (DBBT)	99688-47-8	Industrial	Latvia	Europe	XX
Bromobenzylbromotoluene (DBBT)	99688-47-8	Industrial	Switzerland	Europe	XXIII
Bromochlorodifluoromethane (Halon 1211)	353-59-3	Industrial	Canada	North America	XIII
Bromochloromethane	74-97-5	Industrial	Thailand	Asia	XXIV
Bromofos	2104-96-3	Pesticide	Türkiye	Europe	LIV
Bromofos-ethyl	4824-78-6	Pesticide	Türkiye	Europe	LIV
Bromopropylate	18181-80-1	Pesticide	Türkiye	Europe	LIV
Bromotrifluoromethane	75-63-8	Industrial	Canada	North America	XII
Bromoxynil	1689-84-5	Pesticide	European Union	Europe	LVIII
Bromoxynil octanoate	1689-99-2	Pesticide	Norway	Europe	XIV
Bromuconazole	116255-48-2	Pesticide	Norway	Europe	XIII
Bronopol	52-51-7	Pesticide	Türkiye	Europe	LIV
Butralin	33629-47-9	Pesticide	Bosnia and Herzegovina	Europe	LIII
Butralin	33629-47-9	Pesticide	European Union	Europe	XXXIII
Butralin	33629-47-9	Pesticide	Serbia	Europe	LII
Butralin	33629-47-9	Pesticide	Türkiye	Europe	LIII
Cadmium	7440-43-9	Industrial	Latvia	Europe	XX
Cadusafos	95465-99-9	Pesticide	Bosnia and Herzegovina	Europe	LIII
Cadusafos	95465-99-9	Pesticide	European Union	Europe	XXXVI
Cadusafos	95465-99-9	Pesticide	Serbia	Europe	LII
Cadusafos	95465-99-9	Pesticide	Türkiye	Europe	LIII
Calcium arsenate	7778-44-1	Pesticide	Thailand	Asia	XIV
Calcium cyanide	592-01-8	Pesticide	Türkiye	Europe	LIV
Carbaryl	63-25-2	Pesticide	Mozambique	Africa	LI
Carbaryl	63-25-2	Pesticide	Bosnia and Herzegovina	Europe	LII

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Carbaryl	63-25-2	Pesticide	European Union	Europe	XXVI
Carbaryl	63-25-2	Pesticide	Serbia	Europe	LIX
Carbaryl	63-25-2	Pesticide	Türkiye	Europe	LIII
Carbaryl	63-25-2	Pesticide	Jordan	Near East	XVIII
Carbaryl	63-25-2	Pesticide	Syrian Arab Republic	Near East	XXXII
Carbendazim	10605-21-7	Pesticide	Türkiye	Europe	LIII
Carbon tetrachloride	56-23-5	Industrial	Republic of Korea	Asia	XX
Carbon tetrachloride	56-23-5	Pesticide	Thailand	Asia	XX
Carbon tetrachloride	56-23-5	Industrial	Latvia	Europe	XX
Carbon tetrachloride	56-23-5	Pesticide & Industrial	Switzerland	Europe	XXI
Carbon tetrachloride	56-23-5	Pesticide	Ecuador	Latin America and the Caribbean	LII
Carbon tetrachloride	56-23-5	Industrial	Jordan	Near East	XLIV
Carbon tetrachloride	56-23-5	Pesticide & Industrial	Canada	North America	XII
Carbosulfan	55285-14-8	Pesticide	Burkina Faso	Africa	XLI
Carbosulfan	55285-14-8	Pesticide	Cabo Verde	Africa	XLI
Carbosulfan	55285-14-8	Pesticide	Chad	Africa	XLI
Carbosulfan	55285-14-8	Pesticide	Gambia	Africa	XLI
Carbosulfan	55285-14-8	Pesticide	Mauritania	Africa	XLI
Carbosulfan	55285-14-8	Pesticide	Niger	Africa	XLI
Carbosulfan	55285-14-8	Pesticide	Senegal	Africa	XLI
Carbosulfan	55285-14-8	Pesticide	Togo	Africa	XLI
Carbosulfan	55285-14-8	Pesticide	Bosnia and Herzegovina	Europe	LIII
Carbosulfan	55285-14-8	Pesticide	European Union	Europe	XXXV
Carbosulfan	55285-14-8	Pesticide	Serbia	Europe	LII
Carbosulfan	55285-14-8	Pesticide	Türkiye	Europe	LIII
Chinomethionate	2439-01-2	Pesticide	Türkiye	Europe	LIII
Chloral hydrate	302-17-0	Pesticide	Netherlands (Kingdom of the)	Europe	XIV
Chlorates (sodium chlorate, magnesium chlorate and potassium chlorate)	7775-09-9, 10326-21-3, 3811-04-9	Pesticide	Bosnia and Herzegovina	Europe	LIII
Chlorates (including but not limited to Na, Mg, K chlorates)	7775-09-9, 10326-21-3, 3811-04-9 and others	Pesticide	European Union	Europe	XXXVIII
Chlordecone	143-50-0	Pesticide	China	Asia	XLV
Chlordecone	143-50-0	Industrial	Japan	Asia	XXXII
Chlordecone	143-50-0	Pesticide	Japan	Asia	XXXIII
Chlordecone	143-50-0	Pesticide	Thailand	Asia	XIV
Chlordecone	143-50-0	Pesticide	Switzerland	Europe	XX
Chlordecone	143-50-0	Pesticide	Peru	Latin America and the Caribbean	XLV
Chlorfenapyr	122453-73-0	Pesticide	Bosnia and Herzegovina	Europe	LIII
Chlorfenapyr	122453-73-0	Pesticide	European Union	Europe	XVIII
Chlorfenapyr	122453-73-0	Pesticide	Serbia	Europe	LII
Chlorfenvinphos	470-90-6	Pesticide	Mozambique	Africa	LI
Chlorfenvinphos	470-90-6	Pesticide	Norway	Europe	XIII

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Chlorfenvinphos	470-90-6	Pesticide	Türkiye	Europe	LIII
Chlorfluazuron	71422-67-8	Pesticide	Türkiye	Europe	LIV
Chloroethylene	75-01-4	Industrial	Latvia	Europe	XX
Chloroethylene	75-01-4	Industrial	Türkiye	Europe	LIII
Chlorofluorocarbon (totally halogenated)	75-69-4, 75-71-8, 76-13-1, 76-14-2, 76-15-3	Industrial	Canada	North America	XII
Chloroform	67-66-3	Industrial	Latvia	Europe	XX
Chloromethyl methyl ether	107-30-2	Industrial	Canada	North America	XXVIII
Chloroneb	2675-77-6	Pesticide	Türkiye	Europe	LIV
Chlorophene	120-32-1	Pesticide	European Union	Europe	LIX
Chloropicrin	76-06-2	Pesticide	Türkiye	Europe	LIII
Chlorothalonil	1897-45-6	Pesticide	Costa Rica	Latin America and the Caribbean	LX
Chlorothalonil	1897-45-6	Pesticide	European Union	Europe	LIII
Chlorpropham	101-21-3	Pesticide	European Union	Europe	LIV
Chlorpyrifos	2921-88-2	Pesticide	Malaysia	Asia	LVII
Chlorpyrifos	2921-88-2	Pesticide	Sri Lanka	Asia	XLIX
Chlorpyrifos	2921-88-2	Pesticide	European Union	Europe	LVI
Chlorpyrifos	2921-88-2	Pesticide	Türkiye	Europe	LIV
Chlorpyrifos	2921-88-2	Pesticide	Chile	Latin America and the Caribbean	LVIII
Chlorpyrifos-methyl	5598-13-0	Pesticide	European Union	Europe	LVII
Chlorpyrifos-methyl	5598-13-0	Pesticide	Chile	Latin America and the Caribbean	LVIII
Chlorsulfuron	64902-72-3	Pesticide	Norway	Europe	XIII
Chlorthal-dimethyl	1861-32-1	Pesticide	Bosnia and Herzegovina	Europe	LIII
Chlorthal-dimethyl	1861-32-1	Pesticide	European Union	Europe	XXXVII
Chlorthal-dimethyl	1861-32-1	Pesticide	Serbia	Europe	LIX
Chlorthiophos	60238-56-4	Pesticide	Thailand	Asia	XIV
Clothianidin	210880-92-5	Pesticide	European Union	Europe	LIX
Chlozolate	84332-86-5	Pesticide	European Union	Europe	XVI
Chlozolate	84332-86-5	Pesticide	Serbia	Europe	LIX
Chrysotile asbestos	12001-29-5	Industrial	South Africa	Africa	XXX
Chrysotile asbestos	12001-29-5	Industrial	Iran (Islamic Republic of)	Asia	LII
Chrysotile asbestos	12001-29-5	Industrial	Japan	Asia	XXX
Chrysotile asbestos	12001-29-5	Industrial	Japan	Asia	XXV
Chrysotile asbestos	12001-29-5	Industrial	Bulgaria	Europe	XXII
Chrysotile asbestos	12001-29-5	Industrial	European Union	Europe	XIII
Chrysotile asbestos	12001-29-5	Industrial	Latvia	Europe	XX
Chrysotile asbestos	12001-29-5	Industrial	Switzerland	Europe	XXI
Chrysotile asbestos	12001-29-5	Industrial	Türkiye	Europe	LIII
Chrysotile asbestos	12001-29-5	Industrial	Chile	Latin America and the Caribbean	XV
Chrysotile asbestos	12001-29-5	Industrial	Canada	North America	XLIX
Chrysotile asbestos	12001-29-5	Industrial	Australia	Southwest Pacific	XIX
Coumachlor	81-82-3	Pesticide	Türkiye	Europe	LIV

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Creosote	8001-58-9	Industrial	Latvia	Europe	XX
Creosote oil	61789-28-4	Industrial	Latvia	Europe	XX
Creosote oil, acenaphthene fraction	90640-84-9	Industrial	Latvia	Europe	XX
Creosote, wood	8021-39-4	Industrial	Latvia	Europe	XX
Cyanazine	21725-46-2	Pesticide	Türkiye	Europe	LIII
Cybutryne	28159-98-0	Pesticide	European Union	Europe	LI
Cycloate	1134-23-2	Pesticide	Türkiye	Europe	LIV
Cycloheximide	66-81-9	Pesticide	Thailand	Asia	XIV
Cyclosulfamuron	136849-15-5	Pesticide	Türkiye	Europe	LIV
Cyhexatin	13121-70-5	Pesticide	Japan	Asia	XX
Cyhexatin	13121-70-5	Pesticide	Türkiye	Europe	LIII
Cyhexatin	13121-70-5	Pesticide	Brazil	Latin America and the Caribbean	XXXVI
Cyhexatin	13121-70-5	Pesticide	Canada	North America	XXII
Cypermethrin	67375-30-8	Pesticide	Türkiye	Europe	LIV
DDD	72-54-8	Pesticide	Thailand	Asia	XX
Demephion- <i>O</i>	682-80-4	Pesticide	Thailand	Asia	XIV
Demeton-methyl (isomeric mixture of demeton- <i>O</i> -methyl and demeton- <i>S</i> -methyl)	8022-00-2, 867-27-6, 919-86-8	Pesticide & Industrial	Japan	Asia	XX
Diarsenic pentoxide	1303-28-2	Industrial	Republic of Korea	Asia	XX
Diarsenic pentoxide	1303-28-2	Industrial	European Union	Europe	LV
Diazinon	333-41-5	Pesticide	Mozambique	Africa	LV
Diazinon	333-41-5	Pesticide	Bosnia and Herzegovina	Europe	L
Diazinon	333-41-5	Pesticide	European Union	Europe	XXXII
Diazinon	333-41-5	Pesticide	Serbia	Europe	LIX
Diazinon	333-41-5	Pesticide	Türkiye	Europe	LIII
DBCP (1,2-dibromo-3-chloropropane)	96-12-8	Pesticide	Thailand	Asia	XIV
DBCP (1,2-dibromo-3-chloropropane)	96-12-8	Pesticide	Colombia	Latin America and the Caribbean	XLV
DBCP (1,2-dibromo-3-chloropropane)	96-12-8	Pesticide	Ecuador	Latin America and the Caribbean	LII
DBCP (1,2-dibromo-3-chloropropane)	96-12-8	Pesticide	Canada	North America	XXII
Decabromodiphenylethane (DBDPE)	84852-53-9	Industrial	Australia	Southwest Pacific	LVIII
Dibromotetrafluoroethane	124-73-2	Industrial	Canada	North America	XIII
Dibutyltin hydrogen borate (DBB)	75113-37-0	Industrial	Latvia	Europe	XX
Dichlobenil	1194-65-6	Pesticide	Bosnia and Herzegovina	Europe	LII
Dichlobenil	1194-65-6	Pesticide	European Union	Europe	XXXVI
Dichlobenil	1194-65-6	Pesticide	Norway	Europe	XII
Dichlobenil	1194-65-6	Pesticide	Serbia	Europe	LIX
Dichlofluanid	1085-98-9	Pesticide	Türkiye	Europe	LVII
Dichloro[(dichlorophenyl)methyl]methylbenzene	76253-60-6	Industrial	Latvia	Europe	XX
Dichloro[(dichlorophenyl)methyl]methylbenzene	76253-60-6	Industrial	Switzerland	Europe	XXIII
Dichlorobenzyltoluene	81161-70-8	Industrial	Switzerland	Europe	XXIII

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Dichlorophen	97-23-4	Pesticide	Thailand	Asia	XIV
Dichlorvos	62-73-7	Pesticide	Malawi	Africa	LVI
Dichlorvos	62-73-7	Pesticide	European Union	Europe	LX
Dichlorvos	62-73-7	Pesticide	Serbia	Europe	LII
Dicloran	99-30-9	Pesticide	European Union	Europe	XXXVI
Dicloran	99-30-9	Pesticide	Serbia	Europe	LII
Dicofol	115-32-2	Pesticide	Chile	Latin America and the Caribbean	LIX
Dicofol	115-32-2	Industrial	Japan	Asia	XXII
Dicofol	115-32-2	Industrial	Japan	Asia	XXXII
Dicofol	115-32-2	Pesticide	Japan	Asia	XXXIII
Dicofol	115-32-2	Pesticide	Netherlands (Kingdom of the)	Europe	XXII
Dicofol	115-32-2	Pesticide	Romania	Europe	XX
Dicofol	115-32-2	Pesticide	Switzerland	Europe	XXIV
Dicofol	115-32-2	Pesticide	European Union	Europe	XXXIII
Dicofol	115-32-2	Pesticide	Türkiye	Europe	LVII
Dicofol	115-32-2	Pesticide	Peru	Latin America and the Caribbean	LIII
Dicrotophos	141-66-2	Pesticide	Jordan	Near East	XVIII
Diisobutyl phthalate	84-69-5	Industrial	European Union	Europe	LII
Dimefox	115-26-4	Pesticide	Thailand	Asia	XIV
Dimefox	115-26-4	Pesticide	Jordan	Near East	XVIII
Dimethenamid	87674-68-8	Pesticide	European Union	Europe	XXVII
Dimethenamid	87674-68-8	Pesticide	Serbia	Europe	LIX
Dimethenamid	87674-68-8	Pesticide	Türkiye	Europe	LIII
Dimethipin	55290-64-7	Pesticide	Türkiye	Europe	LIV
Dimethoate	60-51-5	Pesticide	European Union	Europe	LIII
Diniconazole-M	83657-18-5	Pesticide	European Union	Europe	XXXIV
Diniconazole-M	83657-18-5	Pesticide	Türkiye	Europe	LIII
Dinoterb	1420-07-1	Pesticide	Thailand	Asia	XIV
Dinoterb	1420-07-1	Pesticide	European Union	Europe	XIV
Dinoterb	1420-07-1	Pesticide	Serbia	Europe	LIX
Dinoterb	1420-07-1	Pesticide	Switzerland	Europe	XX
Dioxacarb	6988-21-2	Pesticide	Türkiye	Europe	LIV
Dioxathion	78-34-2	Pesticide	Türkiye	Europe	LIV
Diphenamid	957-51-7	Pesticide	Türkiye	Europe	LIV
Diphenylamine	122-39-4	Pesticide	European Union	Europe	XXXIX
Diquat	85-00-7	Pesticide	European Union	Europe	LIV
Distillates (coal tar), naphthalene oils	84650-04-4	Industrial	Latvia	Europe	XX
Distillates (coal tar), upper	65996-91-0	Industrial	Latvia	Europe	XX
Disulfoton	298-04-4	Pesticide	Thailand	Asia	XIV
Diuron	330-54-1	Pesticide	Mozambique	Africa	LII
DPX KE 459 (flupyrsulfuron methyl)	150315-10-9, 144740-54-5	Pesticide	European Union	Europe	LI
Empenthrin	54406-48-3	Pesticide	European Union	Europe	LVIII
Endosulfan	115-29-7**, 959-98-8, 33213-65-9	Pesticide* & Industrial	Japan	Asia	XLIV
Endothal	145-73-3	Pesticide	Türkiye	Europe	LIV
Endrin	72-20-8	Pesticide	Indonesia	Asia	LIII

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Endrin	72-20-8	Pesticide & Industrial	Japan	Asia	XX
Endrin	72-20-8	Pesticide & Industrial	Republic of Korea	Asia	XX
Endrin	72-20-8	Pesticide	Bulgaria	Europe	XXII
Endrin	72-20-8	Pesticide	Romania	Europe	XX
Endrin	72-20-8	Pesticide	Switzerland	Europe	XX
Endrin	72-20-8	Pesticide	Ecuador	Latin America and the Caribbean	LII
Endrin	72-20-8	Pesticide	Peru	Latin America and the Caribbean	XIII
Endrin	72-20-8	Pesticide	Guyana	Latin America and the Caribbean	XXVI
Endrin	72-20-8	Pesticide	Uruguay	Latin America and the Caribbean	XXVIII
Endrin	72-20-8	Pesticide	Jordan	Near East	XVIII
Endrin	72-20-8	Pesticide	Canada	North America	XXII
EPN	2104-64-5	Pesticide	Türkiye	Europe	LIV
Epoxiconazole	106325-08-0	Pesticide	Norway	Europe	XIII
EPTC	759-94-4	Pesticide	Norway	Europe	XIII
EPTC	759-94-4	Pesticide	Türkiye	Europe	LIV
Esbiothrin	84030-86-4	Pesticide	European Union	Europe	LIX
Ethalfuralin	55283-68-6	Pesticide	Türkiye	Europe	LIII
Ethiofencarb	29973-13-5	Pesticide	Türkiye	Europe	LIV
Ethion	563-12-2	Pesticide	Mozambique	Africa	LV
Ethion	563-12-2	Pesticide	Türkiye	Europe	LIII
Ethirimol	23947-60-6	Pesticide	Türkiye	Europe	LIV
Ethoate-methyl	116-01-8	Pesticide	Türkiye	Europe	LIV
Ethoprophos	13194-48-4	Pesticide	European Union	Europe	LIV
Ethoxyquin	91-53-2	Pesticide	European Union	Europe	LVIII
Ethylbromoacetate	105-36-2	Industrial	Latvia	Europe	XX
Extract residues (coal), low temp. coal tar alk	122384-78-5	Industrial	Latvia	Europe	XX
Famoxadone	131807-57-3	Pesticide	European Union	Europe	LIX
Fenamidone	161326-34-7	Pesticide	European Union	Europe	LV
Fenamiphos	22224-92-6	Pesticide	Mozambique	Africa	LV
Fenamiphos	22224-92-6	Pesticide	European Union	Europe	LVII
Fenarimol	60168-88-9	Pesticide	European Union	Europe	XXXVII
Fenarimol	60168-88-9	Pesticide	Türkiye	Europe	LIII
Fenitrothion	122-14-5	Pesticide	Bosnia and Herzegovina	Europe	LII
Fenitrothion	122-14-5	Pesticide	European Union	Europe	XXXII
Fenpiclonil	74738-17-3	Pesticide	Türkiye	Europe	LIV
Fenpropathrin	39515-41-8	Pesticide	Türkiye	Europe	LIII
Fensulfothion	115-90-2	Pesticide	Thailand	Asia	XIV
Fenthion	55-38-9	Pesticide	European Union	Europe	XXII
Fenthion	55-38-9	Pesticide	Türkiye	Europe	LIII
Fentin acetate	900-95-8	Pesticide	European Union	Europe	XVI
Fentin acetate	900-95-8	Pesticide	Türkiye	Europe	LIII
Fentin hydroxide	76-87-9	Pesticide	European Union	Europe	XVI
Fentin hydroxide	76-87-9	Pesticide	Türkiye	Europe	LIII
Fenvalerate	51630-58-1	Pesticide	Türkiye	Europe	LIII

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Ferbam	14484-64-1	Pesticide	Canada	North America	XLIX
Fipronil	120068-37-3	Pesticide	Cabo Verde	Africa	XLI
Fipronil	120068-37-3	Pesticide	Chad	Africa	XLI
Fipronil	120068-37-3	Pesticide	European Union	Europe	LX
Fipronil	120068-37-3	Pesticide	Gambia	Africa	XLI
Fipronil	120068-37-3	Pesticide	Mauritania	Africa	XLI
Fipronil	120068-37-3	Pesticide	Niger	Africa	XLI
Fipronil	120068-37-3	Pesticide	Senegal	Africa	XLI
Fipronil	120068-37-3	Pesticide	Togo	Africa	XLI
Fipronil	120068-37-3	Pesticide	Türkiye	Europe	LIV
Flocoumafen	90035-08-8	Pesticide	Türkiye	Europe	LIV
Fluazifop- <i>P</i> -butyl	79241-46-6	Pesticide	Norway	Europe	XIII
Fluazinam	79622-59-6	Pesticide	Norway	Europe	XXXII
Flubenzimine	37893-02-0	Pesticide	Türkiye	Europe	LIV
Flucythrinate	70124-77-5	Pesticide	Türkiye	Europe	LIV
Flufenoxuron	101463-69-8	Pesticide	European Union	Europe	XXXIX
Flumetsulam	98967-40-9	Pesticide	Türkiye	Europe	LIV
Fluopicolide	239110-15-7	Pesticide	Norway	Europe	XLIII
Fluoroacetic acid and its salts	144-49-0, 62-74-8	Pesticide & Industrial	Japan	Asia	XX
Fluridone	59756-60-4	Pesticide	Türkiye	Europe	LIV
Flurprimidol	56425-91-3	Pesticide	European Union	Europe	XXXVI
Flurtamone	96525-23-4	Pesticide	European Union	Europe	LV
Fluthiacet-methyl	117337-19-6	Pesticide	Türkiye	Europe	LIV
Folpet	133-07-3	Pesticide	Malaysia	Asia	XII
Fomesafen	72178-02-0	Pesticide	Türkiye	Europe	LIV
Fonofos	944-22-9	Pesticide	Thailand	Asia	XIV
Formothion	2540-82-1	Pesticide	Türkiye	Europe	LIV
Furathiocarb	65907-30-4	Pesticide	Türkiye	Europe	LIII
Furfural	98-01-1	Pesticide	Mozambique	Africa	LI
Glufosinate	77182-82-2	Pesticide	European Union	Europe	LX
Halfenprox	111872-58-3	Pesticide	Türkiye	Europe	LVII
Haloxypop	69806-34-4	Pesticide	Türkiye	Europe	LIV
Haloxypop ethoxyethyl ester	87237-48-7	Pesticide	Türkiye	Europe	LIV
Hexachlorobenzene	118-74-1**	Industrial	China	Asia	XLII
Hexachlorobenzene	118-74-1**	Pesticide* & Industrial	Japan	Asia	XX
Hexachlorobenzene	118-74-1**	Pesticide* & Industrial	Panama	Latin America and the Caribbean	XIX
Hexachlorobenzene	118-74-1**	Industrial	Canada	North America	XXVIII
Hexachlorobenzene	118-74-1**	Industrial	Australia	Southwest Pacific	LVIII
Hexachlorobutadiene	87-68-3	Industrial	Japan	Asia	XXII
Hexachlorobutadiene	87-68-3	Industrial	Canada	North America	XXVIII
Hexachloroethane	67-72-1	Industrial	Latvia	Europe	XX
Hexaconazole	79983-71-4	Pesticide	Türkiye	Europe	LIV
Hexaflumuron	86479-06-3	Pesticide	Türkiye	Europe	LIV
Hexane, 1,6-diisocyanato-, homopolymer, reaction products with alpha-fluoro-omega-2-hydroxyethyl-poly(difluoromethylene), C ₁₆₋₂₀ -branched alcohols and 1-octadecanol	Not available	Industrial	Canada	North America	XLI
Hexazinone	51235-04-2	Pesticide	Burkina Faso	Africa	XLV

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Hexazinone	51235-04-2	Pesticide	Cabo Verde	Africa	XLV
Hexazinone	51235-04-2	Pesticide	Chad	Africa	XLV
Hexazinone	51235-04-2	Pesticide	Gambia	Africa	XLV
Hexazinone	51235-04-2	Pesticide	Guinea-Bissau	Africa	XLV
Hexazinone	51235-04-2	Pesticide	Mali	Africa	XLV
Hexazinone	51235-04-2	Pesticide	Mauritania	Africa	XLV
Hexazinone	51235-04-2	Pesticide	Niger	Africa	XLV
Hexazinone	51235-04-2	Pesticide	Senegal	Africa	XLV
Hexazinone	51235-04-2	Pesticide	Togo	Africa	XLV
Hexazinone	51235-04-2	Pesticide	Norway	Europe	XIII
Hydrogen cyanamide	420-04-2	Pesticide	Türkiye	Europe	LIV
Hydrogen cyanide	74-90-8	Pesticide	Türkiye	Europe	LIV
Hydrogen peroxide	7722-84-1	Pesticide	Türkiye	Europe	LIV
Imazalil	35554-44-0	Pesticide	Norway	Europe	XIII
Imazapic	104098-48-8	Pesticide	Türkiye	Europe	LIV
Imazapyr	81334-34-1	Pesticide	Norway	Europe	XIV
Imazapyr	81334-34-1	Pesticide	Türkiye	Europe	LIV
Imazethapyr	81335-77-5	Pesticide	Türkiye	Europe	LIV
Iminoctadine	13516-27-3	Pesticide	Türkiye	Europe	LIII
Indolyacetic acid	87-51-4	Pesticide	Türkiye	Europe	LIII
Indoxacarb	173584-44-6	Pesticide	European Union	Europe	LIX
Iprodione	36734-19-7	Pesticide	Mozambique	Africa	LI
Iprodione	36734-19-7	Pesticide	European Union	Europe	L
Iprodione	36734-19-7	Pesticide	Türkiye	Europe	LIV
Isodrin	465-73-6	Pesticide	Switzerland	Europe	XX
Isofenphos	25311-71-1	Pesticide	Türkiye	Europe	LIV
Isoproturon	34123-59-6	Pesticide	European Union	Europe	LI
Isopyrazam	881685-58-1	Pesticide	European Union	Europe	LIX
Isopyrazam	881685-58-1	Pesticide	Norway	Europe	XXXVII
Kelevan	4234-79-1	Pesticide	Switzerland	Europe	XX
Kinetin	525-79-1	Pesticide	Türkiye	Europe	LIV
Lead arsenate	7784-40-9	Pesticide	Japan	Asia	XX
Lead arsenate	7784-40-9	Pesticide	Peru	Latin America and the Caribbean	XXXV
Lead carbonate	598-63-0	Industrial	Latvia	Europe	XX
Lead carbonate	598-63-0	Industrial	Jordan	Near East	XXXVI
Lead chromate including sulfochromate yellow and chromate molybdate sulfate red	7758-97-6 1344-37-2 12656-85-8	Industrial	Cameroon	Africa	LX
Lead chromate including sulfochromate yellow and chromate molybdate sulfate red	7758-97-6 1344-37-2 12656-85-8	Industrial	Morocco	Africa	LX
Lead hydroxycarbonate	1319-46-6	Industrial	Latvia	Europe	XX
Lead sulfate	15739-80-7	Industrial	Latvia	Europe	XX
Lead(II)sulfate	7446-14-2	Industrial	Latvia	Europe	XX
Leptophos	21609-90-5	Pesticide	Ecuador	Latin America and the Caribbean	LII
Lindane	58-89-9**	Industrial	China	Asia	L
Linuron	330-55-2	Pesticide	European Union	Europe	LI
Linuron	330-55-2	Pesticide	Norway	Europe	XXXVI
Malathion	121-75-5	Pesticide	Syrian Arab Republic	Near East	XXXII
Maleic hydrazide	123-33-1	Pesticide	Romania	Europe	XX

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Mancozeb	8018-01-7	Pesticide	European Union	Europe	LVI
Maneb	12427-38-2	Pesticide	European Union	Europe	LX
MCPA-thioethyl(phenothiol)	25319-90-8	Pesticide	Thailand	Asia	XIV
MCPB	94-81-5	Pesticide	Thailand	Asia	XIV
Mecoprop	7085-19-0	Pesticide	Thailand	Asia	XIV
Mephosfolan	950-10-7	Pesticide	Thailand	Asia	XIV
Mephosfolan	950-10-7	Pesticide	Türkiye	Europe	LIV
Mepiquat chloride	24307-26-4	Pesticide	Norway	Europe	XIII
Mercurous chloride (Calomel)	10112-91-1	Pesticide	Romania	Europe	XX
Mercury	7439-97-6	Pesticide & Industrial	Indonesia	Asia	LIII
Mercury	7439-97-6	Industrial	European Union	Europe	LVI
Mercury	7439-97-6	Industrial	Türkiye	Europe	LIII
Mercury	7439-97-6	Industrial	Colombia	Latin America and the Caribbean	LII
Metaldehyde	108-62-3, 9002-91-9	Pesticide	Norway	Europe	XLVII
Methabenzthiazuron	18691-97-9	Pesticide	Türkiye	Europe	LIV
Methazole	20354-26-1	Pesticide	Australia	Southwest Pacific	XII
Methodathion	950-37-8	Pesticide	Mozambique	Africa	LI
Methodathion	950-37-8	Pesticide	Türkiye	Europe	LIII
Methodathion	950-37-8	Pesticide	Uruguay	Latin America and the Caribbean	L
Methiocarb	2032-65-7	Pesticide	Mozambique	Africa	LV
Methiocarb	2032-65-7	Pesticide	European Union	Europe	LVI
Methomyl	16752-77-5	Pesticide	Mozambique	Africa	LV
Methomyl	16752-77-5	Pesticide	Chile	Latin America and the Caribbean	LVIII
Methomyl	16752-77-5	Pesticide	Uruguay	Latin America and the Caribbean	L
Methoprene	40596-69-8	Pesticide	Türkiye	Europe	LIV
Methyl bromide	74-83-9	Pesticide	Malawi	Africa	XXX
Methyl bromide	74-83-9	Pesticide	Indonesia	Asia	LIII
Methyl bromide	74-83-9	Pesticide & Industrial	Republic of Korea	Asia	XX
Methyl bromide	74-83-9	Pesticide	Netherlands (Kingdom of the)	Europe	XV
Methyl bromide	74-83-9	Pesticide & Industrial	Switzerland	Europe	XXI
Methyl bromide	74-83-9	Pesticide	Colombia	Latin America and the Caribbean	LII
Methyl bromoacetate	96-32-2	Industrial	Latvia	Europe	XX
Methyl cellosolve	109-86-4	Industrial	Canada	North America	XXVIII
Methyl parathion	298-00-0	Pesticide	Côte d'Ivoire	Africa	XX
Methyl parathion	298-00-0	Pesticide	Gambia	Africa	XIX
Methyl parathion	298-00-0	Pesticide	Nigeria	Africa	XXI
Methyl parathion	298-00-0	Pesticide	China	Asia	L
Methyl parathion	298-00-0	Pesticide	Indonesia	Asia	LIII
Methyl parathion	298-00-0	Pesticide & Industrial	Japan	Asia	XX
Methyl parathion	298-00-0	Pesticide	Thailand	Asia	XXI

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Methyl parathion	298-00-0	Pesticide	Bulgaria	Europe	XXII
Methyl parathion	298-00-0	Pesticide	European Union	Europe	XVIII
Methyl parathion	298-00-0	Pesticide	Brazil	Latin America and the Caribbean	XX
Methyl parathion	298-00-0	Pesticide	Brazil	Latin America and the Caribbean	LX
Methyl parathion	298-00-0	Pesticide	Dominican Republic	Latin America and the Caribbean	XXV
Methyl parathion	298-00-0	Pesticide	El Salvador	Latin America and the Caribbean	XX
Methyl parathion	298-00-0	Pesticide	Guyana	Latin America and the Caribbean	XXVI
Methyl parathion	298-00-0	Pesticide	Panama	Latin America and the Caribbean	XIX
Methyl parathion	298-00-0	Pesticide	Panama	Latin America and the Caribbean	XLVII
Methyl parathion	298-00-0	Pesticide	Uruguay	Latin America and the Caribbean	XXVIII
Methyl parathion	298-00-0	Pesticide	Uruguay	Latin America and the Caribbean	L
Metolachlor	51218-45-2	Pesticide	Türkiye	Europe	LIV
Metominostrobin	133408-50-1	Pesticide	Türkiye	Europe	LIV
Metosulam	139528-85-1	Pesticide	Türkiye	Europe	LIV
Mevinphos	26718-65-0	Pesticide	Thailand	Asia	XIV
Mevinphos	26718-65-0	Pesticide	Jordan	Near East	XVIII
Mevinphos	7786-34-7	Pesticide	Türkiye	Europe	LIV
Mirex	2385-85-5	Pesticide & Industrial	Indonesia	Asia	LIII
Mirex	2385-85-5	Pesticide & Industrial	Japan	Asia	XXI
Mirex	2385-85-5	Pesticide	Thailand	Asia	XX
Mirex	2385-85-5	Pesticide	Bulgaria	Europe	XXII
Mirex	2385-85-5	Pesticide & Industrial	Switzerland	Europe	XXIII
Mirex	2385-85-5	Pesticide	Colombia	Latin America and the Caribbean	XLV
Mirex	2385-85-5	Pesticide	Cuba	Latin America and the Caribbean	XXVIII
Mirex	2385-85-5	Pesticide	Ecuador	Latin America and the Caribbean	LII
Mirex	2385-85-5	Pesticide	Guyana	Latin America and the Caribbean	XXVI
Mirex	2385-85-5	Pesticide	Uruguay	Latin America and the Caribbean	XXVIII
Mirex	2385-85-5	Industrial	Canada	North America	XII
Mirex	2385-85-5	Industrial	Canada	North America	XXVIII

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Mixture of: Glyphosate Ethoxylated tallow alkylamines	1071-83-6 61791-26-2	Pesticide	Chile	Latin America and Caribbean	LVIII
Monolinuron	1746-81-2	Pesticide	Türkiye	Europe	LIII
Monomethyl dichlorodiphenyl methane	122808-61-1	Industrial	Latvia	Europe	XX
<i>N,N'</i> -Ditolyl- <i>p</i> - phenylenediamine; <i>N,N'</i> - Dixylyl- <i>p</i> -phenylenediamine; <i>N</i> -Tolyl- <i>N'</i> -xylyl- <i>p</i> - phenylenediamine	27417-40-9, 28726-30-9, 70290-05-0	Industrial	Japan	Asia	XXI
Naled	300-76-5	Pesticide	European Union	Europe	XXXIX
NCC ether	94097-88-8	Industrial	Canada	North America	XXVIII
Nickel	7440-02-0	Industrial	Latvia	Europe	XX
Nitrofen	1836-75-5	Pesticide	European Union	Europe	XVI
Nitrofen	1836-75-5	Pesticide	Romania	Europe	XX
<i>N</i> -Nitrosodimethylamine	62-75-9	Industrial	Canada	North America	XXVIII
Nonylphenol	11066-49-2, 25154-52-3, 84852-15-3, 90481-04-2	Pesticide & Industrial	European Union	Europe	XXIII
Nonylphenol ethoxylate	127087-87-0, 26027-38-3, 37205-87-1, 68412-54-4, 9016-45-9	Pesticide & Industrial	European Union	Europe	XXIII
Nonylphenols and nonylphenol ethoxylates	104-40-5, 11066-49-2, 127087-87-0, 25154-52-3, 26027-38-3, 37205-87-1, 68412-54-4, 84852-15-3, 9016-45-9, 90481-04-2	Pesticide	South Africa	Africa	XLVI
Nonylphenols and nonylphenol ethoxylates	104-40-5, 11066-49-2, 25154-52-3, 84852-15-3, 90481-04-2, 127087-87-0, 26027-38-3, 37205-87-1, 68412-54-4, 9016-45-9	Pesticide & Industrial	Switzerland	Europe	XXXVI
Norflurazon	27314-13-2	Pesticide	Türkiye	Europe	LIV
Nuarimol	63284-71-9	Pesticide	Türkiye	Europe	LIV
Octylphenols and octylphenol ethoxylates	140-66-9, 1806-26-4, 27193-28-8, 68987-90-6, 9002-93-1, 9036-19-5	Pesticide & Industrial	Switzerland	Europe	XXXVI
Ofurace	58810-48-3	Pesticide	Türkiye	Europe	LIV
Omethoate	1113-02-6	Pesticide	Türkiye	Europe	LIII
Orthosulfamuron	213464-77-8	Pesticide	European Union	Europe	LI
Oxadixyl	77732-09-3	Pesticide	Türkiye	Europe	LIV

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Oxamyl	23135-22-0	Pesticide	Türkiye	Europe	LIV
Oxasulfuron	144651-06-9	Pesticide	European Union	Europe	LV
Oxine-copper	10380-28-6	Pesticide	Türkiye	Europe	LIV
Oxycarboxin	5259-88-1	Pesticide	Türkiye	Europe	LIV
Oxydemeton-methyl	301-12-2	Pesticide	European Union	Europe	XXX
Oxydemeton-methyl	301-12-2	Pesticide	Türkiye	Europe	LIII
Oxyfluorfen	42874-03-3	Pesticide	Mozambique	Africa	LII
Paraquat	4685-14-7	Pesticide	Mozambique	Africa	LII
Paraquat	4685-14-7	Pesticide	Togo	Africa	XLII
Paraquat	4685-14-7	Pesticide	Malaysia	Asia	LII
Paraquat	4685-14-7	Pesticide	Sri Lanka	Asia	XXVIII
Paraquat	4685-14-7	Pesticide	Sweden	Europe	XXIII
Paraquat	4685-14-7	Pesticide	Türkiye	Europe	LVII
Paraquat dichloride	1910-42-5	Pesticide	Burkina Faso	Africa	XXXV
Paraquat dichloride	1910-42-5	Pesticide	Cabo Verde	Africa	XXXV
Paraquat dichloride	1910-42-5	Pesticide	Chad	Africa	XXXV
Paraquat dichloride	1910-42-5	Pesticide	Mali	Africa	XXXV
Paraquat dichloride	1910-42-5	Pesticide	Mauritania	Africa	XXXV
Paraquat dichloride	1910-42-5	Pesticide	Niger	Africa	XXXV
Paraquat dichloride	1910-42-5	Pesticide	Senegal	Africa	XXXV
Paraquat dichloride	1910-42-5	Pesticide	Sweden	Europe	XXIII
Paraquat dichloride	1910-42-5	Pesticide	Chile	Latin America and the Caribbean	LVIII
Paraquat dichloride	1910-42-5	Pesticide	Uruguay	Latin America and the Caribbean	XXVIII
Paraquat dimethyl,bis	2074-50-2	Pesticide	Sweden	Europe	XXIII
Paris green	12002-03-8	Pesticide	Thailand	Asia	XIV
Pencycuron	66063-05-6	Pesticide	European Union	Europe	LX
Pendimethalin	40487-42-1	Pesticide	Norway	Europe	XXV
Pentachlorobenzene	608-93-5	Pesticide	China	Asia	XLV
Pentachlorobenzene	608-93-5	Industrial	Japan	Asia	XXXII
Pentachlorobenzene	608-93-5	Pesticide	Japan	Asia	XXXIII
Pentachlorobenzene	608-93-5	Industrial	Canada	North America	XXVIII
Pentachlorobenzene	608-93-5	Industrial	Australia	Southwest Pacific	LVIII
Pentachloroethane	76-01-7	Industrial	Latvia	Europe	XX
Pentachlorophenol and its salts and esters	87-86-5**, 131-52-2, 27735-64-4, 3772-94-9	Pesticide* & Industrial	Japan	Asia	XLIV
<i>Perfluorocarboxylic acids that have the molecular formula C_nF_{2n+1}CO₂H in which 8 ≤ n ≤ 20, their salts, and their precursors (LC-PFCAs)</i>	375-95-1, 335-76-2, 2058-94-8, 307-55-1, 72629-94-8, 376-06-7, 141074-63-7, 67905-19-5, 57475-95-3, 16517-11-6, 133921-38-7, 68310-12-3 (list is not exhaustive)	Industrial	Canada	North America	XLVII

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Perfluorooctane sulphonate (PFOS), its salts and perfluorooctanesulfonyl fluoride (PFOSF)	2795-39-3**, 70225-14-8**, 29081-56-9**, 29457-72-5**, 307-35-7**	Pesticide & Industrial*	China	Asia	XLV
Permethrin	52645-53-1	Pesticide	Syrian Arab Republic	Near East	XXXII
Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)-	3846-71-7	Industrial	Japan	Asia	XXVII
Phenthoate	2597-03-7	Pesticide	Malaysia	Asia	XLIV
Phenthoate	2597-03-7	Pesticide	Türkiye	Europe	LVII
Phosalone	2310-17-0	Pesticide	European Union	Europe	XXVII
Phosalone	2310-17-0	Pesticide	Türkiye	Europe	LIII
Phosmet	732-11-6	Pesticide	European Union	Europe	LIX
Phosphamidon	13171-21-6	Pesticide	Chile	Latin America and the Caribbean	LIX
Phosphamidon	13171-21-6	Pesticide	Côte d'Ivoire	Africa	XX
Phosphamidon	13171-21-6	Pesticide	Indonesia	Asia	LIII
Phosphamidon	13171-21-6	Pesticide	China	Asia	L
Phosphamidon	13171-21-6	Pesticide & Industrial	Japan	Asia	XX
Phosphamidon	13171-21-6	Pesticide	Thailand	Asia	XIV
Phosphamidon	13171-21-6	Pesticide	Brazil	Latin America and the Caribbean	XX
Phosphamidon	13171-21-6	Pesticide	Panama	Latin America and the Caribbean	XIX
Phosphoric acid	7664-38-2	Pesticide	Türkiye	Europe	LVII
Picoxystrobin	117428-22-5	Pesticide	European Union	Europe	L
Polychlorinated naphthalenes	70776-03-3	Industrial	Japan	Asia	XXI
Polychlorinated naphthalenes	28699-88-9, 1321-65-9, 1335-88-2, 1321-64-8, 1335-87-1, 32241-08-0, 2234-13-1	Industrial	Japan	Asia	XLIV
Polychlorinated naphthalenes	70776-03-3	Industrial	Canada	North America	XXXVIII
Polychloroterpenes	8001-50-1	Pesticide	Thailand	Asia	XX
Primisulfuron-methyl	86209-51-0	Pesticide	Türkiye	Europe	LVII
Prochloraz	67747-09-5	Pesticide	Brazil	Latin America and the Caribbean	LX
Procymidone	32809-16-8	Pesticide	European Union	Europe	XXXVII
Procymidone	32809-16-8	Pesticide	Türkiye	Europe	LIII
Profenofos	41198-08-7	Pesticide	Malaysia	Asia	XLIV
Profenofos	41198-08-7	Pesticide	Türkiye	Europe	LVII
Prometryn	7287-19-6	Pesticide	Türkiye	Europe	LVII
Propachlor	1918-16-7	Pesticide	European Union	Europe	XXXIII
Propachlor	1918-16-7	Pesticide	Norway	Europe	XXVI
Propanil	709-98-8	Pesticide	European Union	Europe	XXXIX
Propanil	709-98-8	Pesticide	Türkiye	Europe	LIII
Propargite	2312-35-8	Pesticide	European Union	Europe	XXXIX

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Propargite	2312-35-8	Pesticide	Türkiye	Europe	LIII
Propineb	12071-83-9 (monomer) 9016-72-2 (homopolymer)	Pesticide	European Union	Europe	LV
Propisochlor	86763-47-5	Pesticide	European Union	Europe	XXXVI
Propoxur	114-26-1	Pesticide	Türkiye	Europe	LVII
Propylbromoacetate	35223-80-4	Industrial	Latvia	Europe	XX
Prothiofos	34643-46-4	Pesticide	Malaysia	Asia	XLIV
Prothiofos	34643-46-4	Pesticide	Türkiye	Europe	LVII
Prothoate	2275-18-5	Pesticide	Thailand	Asia	XIV
Prothoate	2275-18-5	Pesticide	Türkiye	Europe	LVII
Pymetrozine	123312-89-0	Pesticide	European Union	Europe	LV
Pymetrozine	123312-89-0	Pesticide	Norway	Europe	XXXIX
Pyrazophos	13457-18-6	Pesticide	European Union	Europe	XIII
Pyrazophos	13457-18-6	Pesticide	Türkiye	Europe	LIII
Pyridaphenthion	119-12-0	Pesticide	Türkiye	Europe	LVII
Pyrimidifen	105779-78-0	Pesticide	Türkiye	Europe	LVII
Pyrinuron	53558-25-1	Pesticide	Thailand	Asia	XX
Pyriothiobac-sodium	123343-16-8	Pesticide	Türkiye	Europe	LVII
Quinalphos	13593-03-8	Pesticide	Malaysia	Asia	XLIV
Quinalphos	13593-03-8	Pesticide	Türkiye	Europe	LVII
Quinoxifen	124495-18-7	Pesticide	European Union	Europe	LV
Quintozene	82-68-8	Pesticide	European Union	Europe	XV
Quintozene	82-68-8	Pesticide	Romania	Europe	XX
Quintozene	82-68-8	Pesticide	Switzerland	Europe	XX
Quintozene	82-68-8	Pesticide	Türkiye	Europe	LIII
Resmethrin	10453-86-8	Pesticide	Türkiye	Europe	LVII
Schradan	152-16-9	Pesticide & Industrial	Japan	Asia	XX
Schradan	152-16-9	Pesticide	Thailand	Asia	XIV
Simazine	122-34-9	Pesticide	European Union	Europe	XXI
Simazine	122-34-9	Pesticide	Norway	Europe	XIII
Simazine	122-34-9	Pesticide	Türkiye	Europe	LIII
Sodium arsenite	7784-46-5	Pesticide	Netherlands (Kingdom of the)	Europe	XIV
Sodium cyanide	143-33-9	Pesticide	Türkiye	Europe	LVII
Sodium fluoroacetate	62-74-8	Pesticide	Cuba	Latin America and the Caribbean	XXVIII
Sodium trichloroacetate	650-51-1	Pesticide	Netherlands (Kingdom of the)	Europe	XIV
Sulfosulfurone	141776-32-1	Pesticide	Norway	Europe	XV
Sulfotep	3689-24-5	Pesticide	Thailand	Asia	XIV
Tar acids, coal, crude	65996-85-2	Industrial	Latvia	Europe	XX
TCMTB (Thiocyanic acid, (2-benzothiazolylthio)methyl ester)	21564-17-0	Pesticide	Türkiye	Europe	LVII
Tebuthiuron	34014-18-1	Pesticide	Türkiye	Europe	LVII
Tecnazene	117-18-0	Pesticide	European Union	Europe	XV
Terbutryn	886-50-0	Pesticide	Türkiye	Europe	LVII

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Tetrachlorobenzene	12408-10-5, 84713-12-2, 634-66-2, 634-90-2, 95-94-3	Industrial	Canada	North America	XXVIII
Tetradifon	116-29-0	Pesticide	Türkiye	Europe	LVII
Tetraethyl pyrophosphate (TEPP)	107-49-3	Pesticide & Industrial	Japan	Asia	XX
Thallium acetate	563-68-8	Industrial	Republic of Korea	Asia	XX
Thallium nitrate	10102-45-1	Industrial	Republic of Korea	Asia	XX
Thallium sulphate	7446-18-6	Industrial	Republic of Korea	Asia	XX
Thallium sulphate	7446-18-6	Pesticide	Thailand	Asia	XX
Thiabendazole	148-79-8	Pesticide	Norway	Europe	XIII
Thiamethoxam	153719-23-4	Pesticide	European Union	Europe	LVI
Thiazafluron	25366-23-8	Pesticide	Türkiye	Europe	LVII
Thiobencarb	28249-77-6	Pesticide	Türkiye	Europe	LIII
Thiocyclam hydrogen oxalate	31895-22-4	Pesticide	Türkiye	Europe	LIII
Thiodicarb	59669-26-0	Pesticide	Mozambique	Africa	LI
Thiodicarb	59669-26-0	Pesticide	European Union	Europe	XXVII
Thiodicarb	59669-26-0	Pesticide	Türkiye	Europe	LIII
Thiometon	640-15-3	Pesticide	Türkiye	Europe	LVII
Thiram	137-26-8	Pesticide	European Union	Europe	LVI
Tolfenpyrad	129558-76-5	Pesticide	Türkiye	Europe	LVII
Tralomethrin	66841-25-6	Pesticide	Türkiye	Europe	LVII
Triadimefon	43121-43-3	Pesticide	Türkiye	Europe	LVII
Triasulfuron	82097-50-5	Pesticide	European Union	Europe	LI
Triazamate	112143-82-5	Pesticide	Türkiye	Europe	LVII
Triazophos	24017-47-8	Pesticide	Cabo Verde	Africa	XLI
Triazophos	24017-47-8	Pesticide	Chad	Africa	XLI
Triazophos	24017-47-8	Pesticide	Gambia	Africa	XLI
Triazophos	24017-47-8	Pesticide	Malaysia	Asia	XLIV
Triazophos	24017-47-8	Pesticide	Mauritania	Africa	XLI
Triazophos	24017-47-8	Pesticide	Niger	Africa	XLI
Triazophos	24017-47-8	Pesticide	Senegal	Africa	XLI
Triazophos	24017-47-8	Pesticide	Togo	Africa	XLI
Triazophos	24017-47-8	Pesticide	Türkiye	Europe	LIII
Tribufos	78-48-8	Pesticide	Australia	Southwest Pacific	XIII
Tributyl tetradecyl phosphonium chloride	81741-28-8	Industrial	Canada	North America	XIII
Triclosan	3380-34-5	Pesticide	European Union	Europe	LI
Tricyclazole	41814-78-2	Pesticide	European Union	Europe	LI
Tridemorph	24602-86-6	Pesticide	Türkiye	Europe	LIII
Triflumuron	64628-44-0	Pesticide	European Union	Europe	LIX
Trifluralin	1582-09-8	Pesticide	European Union	Europe	XXXVI
Trifluralin	1582-09-8	Pesticide	Türkiye	Europe	LIII
Triforine	26644-46-2	Pesticide	Türkiye	Europe	LVII
Tris-(1-aziridinyl)phosphine oxide	545-55-1	Industrial	Latvia	Europe	XX
Tris-(1-aziridinyl)phosphine oxide	545-55-1	Industrial	Switzerland	Europe	XXIII
Tris(2-chloroethyl) phosphate	115-96-8	Industrial	European Union	Europe	LII

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Tris(2,3 dibromopropyl) phosphate	126-72-7	Pesticide	Indonesia	Asia	LIII
Vinclozolin	50471-44-8	Pesticide	Norway	Europe	XIII
Vinclozolin	50471-44-8	Pesticide	Jordan	Near East	XVIII
Vinclozolin	50471-44-8	Pesticide	Türkiye	Europe	LIII
Zinc phosphide	1314-84-7	Pesticide	Mozambique	Africa	LV
Zineb	12122-67-7	Pesticide	Ecuador	Latin America and the Caribbean	XX
Zineb	12122-67-7	Pesticide	Türkiye	Europe	LIII

Notifications of final regulatory action for chemicals not listed in Annex III**PART B****NOTIFICATIONS OF FINAL REGULATORY ACTION FOR CHEMICALS NOT LISTED IN ANNEX III AND VERIFIED AS NOT CONTAINING ALL THE INFORMATION REQUIRED BY ANNEX I TO THE CONVENTION**

Chemical name	CAS No.	Category	Party	Region	PIC Circular
1,2-Dichloropropane	78-87-5	Pesticide	Saudi Arabia	Near East	XXXII
1,4-Dichlorobenzene	106-46-7	Pesticide	Israel	Europe	XXXV
(Dibromochloropropane) 1,2-Dibromo-3-chloropropane	96-12-8	Pesticide	Maldives	Asia	LIV
1-Bromo-2-chloroethane	107-04-0	Pesticide	Saudi Arabia	Near East	XXXII
1,1,2,2-tetra chloroethane	79-34-5	Pesticide	Maldives	Asia	LIV
2-Amino-2-thiazoline-4-carboxylic acid	2150-55-2	Pesticide	Türkiye	Europe	LVII
2,3-Dichlorophenol	576-24-9	Pesticide	Indonesia	Asia	LVI
2,4-Dichlorophenol	120-83-2	Pesticide	Indonesia	Asia	LVI
2,5-Dichlorophenol	583-78-8	Pesticide	Indonesia	Asia	LVI
2-(2,4,5-Trichlorephenoxy)ethyl 2,2-dichloropropanoate	136-25-4	Pesticide	Saudi Arabia	Near East	XXXVII
2,4,5-TP (Silvex; Fenoprop)	93-72-1	Pesticide	Saudi Arabia	Near East	XXXII
2,4,5-Trichlorophenol	95-95-4	Pesticide	Ecuador	Latin America and the Caribbean	XLVII
2,4,5-Trichlorophenol	95-95-4	Pesticide	Indonesia	Asia	LVI
2,4,6-Trichlorophenol	88-06-2	Pesticide	Indonesia	Asia	LVI
Acephate	30560-19-1	Pesticide	Oman	Near East	XXXIX
Acetate	7784-40-9	Pesticide	China	Asia	LV
Acetochlor	34256-82-1	Pesticide	Maldives	Asia	LIV
Acrolein	107-02-8	Pesticide	Saudi Arabia	Near East	XXXII
Acrylonitrile	107-13-1	Pesticide	Saudi Arabia	Near East	XXXVII
Alpha-hexachlorocyclohexane	319-84-6	Industrial	China	Asia	LX
Amitraz	33089-61-1	Pesticide	Oman	Near East	XXXIX
Amitrole	61-82-5	Pesticide	Oman	Near East	XXXIX
Amitrole	61-82-5	Pesticide	Saudi Arabia	Near East	XXXVII
Arsenic	1327-53-3	Pesticide	China	Asia	LV
Arsenic compound	7440-38-2	Pesticide	Türkiye	Europe	LVII
Atrazine	1912-24-9	Pesticide	Oman	Near East	XXXIX
Azinphos-ethyl	2642-71-9	Pesticide	Saudi Arabia	Near East	XXXVII
Bendiocarb	22781-23-3	Pesticide	Saudi Arabia	Near East	XXXVII
Benfuracarb	82560-54-1	Pesticide	Maldives	Asia	LIV
Benomyl	17804-35-2	Pesticide	Ecuador	Latin America and the Caribbean	XLVII
Benomyl	17804-35-2	Pesticide	Oman	Near East	XXXIX
Benomyl	17804-35-2	Pesticide	Saudi Arabia	Near East	XXXVIII
Beta-hexachlorocyclohexane	319-85-7	Industrial	China	Asia	LX
Bifenthrin	82657-04-3	Pesticide	Oman	Near East	XXXIX
Bromadiolone	28772-56-7	Pesticide	Oman	Near East	XXXIX
Bromadiolone	28772-56-7	Pesticide	Saudi Arabia	Near East	XXXVIII
Bromofos-ethyl	4824-78-6	Pesticide	Oman	Near East	XXXIX
Bromofos-ethyl	4824-78-6	Pesticide	Saudi Arabia	Near East	XXXVII
Bromophos-ethyl (O-(4-Bromo-2-chlorophenyl) O,O-diethyl phosphorothioate)	4824-78-6	Pesticide	Indonesia	Asia	XLI
Cadmium	7440-43-9	Pesticide	Thailand	Asia	XX

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Cadusafos	95465-99-9	Pesticide	Maldives	Asia	LIV
Cadusafos	95465-99-9	Pesticide	Oman	Near East	XXXIX
Calcium arsenate	7778-44-1	Pesticide	Maldives	Asia	LIV
Calcium cyanide	592-01-8	Pesticide	Saudi Arabia	Near East	XXVII
Captan	133-06-2	Pesticide	Oman	Near East	XXXIX
Captan	133-06-2	Pesticide	Saudi Arabia	Near East	XXVII
Carbaryl	63-25-2	Pesticide	El Salvador	Latin America and the Caribbean	XXVII
Carbaryl	63-25-2	Pesticide	Saudi Arabia	Near East	XXXVIII
Carbosulfan	55285-14-8	Pesticide	Maldives	Asia	LIV
Chloranil	118-75-2	Pesticide	Mexico	Latin America and the Caribbean	XXVIII
Chloranil	118-75-2	Pesticide	Saudi Arabia	Near East	XXXII
Chlordane	57-74-9	Industrial	China	Asia	LX
Chlordecone	143-50-0	Industrial	China	Asia	LX
Chlordecone	143-50-0	Pesticide	Maldives	Asia	LIV
Chlordecone	143-50-0	Pesticide	Mexico	Latin America and the Caribbean	XXVIII
Chlordecone	143-50-0	Pesticide	Saudi Arabia	Near East	XXXII
Chlorfenvinphos	470-90-6	Pesticide	Maldives	Asia	LIV
Chlormephos	24934-91-6	Pesticide	Oman	Near East	XXXIX
Chlormephos	24934-91-6	Pesticide	Saudi Arabia	Near East	XXVII
Chlornitrofen	1836-77-7	Pesticide	Japan	Asia	XX
Chloropicrin	76-06-2	Pesticide	Oman	Near East	XXXIX
Chloropicrin	76-06-2	Pesticide	Saudi Arabia	Near East	XXVII
Chlorothalonil	1897-45-6	Pesticide	Saudi Arabia	Near East	XXXVIII
Chlorpyrifos	2921-88-2	Pesticide	Maldives	Asia	LIV
Chlorpyrifos	2921-88-2	Pesticide	Saudi Arabia	Near East	XXXVIII
Chlorthiophos	60238-56-4	Pesticide	Saudi Arabia	Near East	XXVII
Chrysotile asbestos	12001-29-5	Industrial	El Salvador	Latin America and the Caribbean	XXVII
Cis-Zeatin	327771-64-5	Pesticide	Türkiye	Europe	LVII
Copper arsenate hydroxide	16102-92-4	Pesticide	Thailand	Asia	XX
Cyanazine	21725-46-2	Pesticide	Oman	Near East	XXXIX
Cyanophos	2636-26-2	Pesticide	Mexico	Latin America and the Caribbean	XXVIII
Cycloheximide	66-81-9	Pesticide	Saudi Arabia	Near East	XXVII
Cyhexatin	13121-70-5	Pesticide	Indonesia	Asia	LVI
Cyhexatin	13121-70-5	Pesticide	Maldives	Asia	LIV
Cyhexatin	13121-70-5	Pesticide	Saudi Arabia	Near East	XXXII
Daminozide	1596-84-5	Pesticide	Saudi Arabia	Near East	XXXII
DDD	72-54-8	Pesticide	Saudi Arabia	Near East	XXVII
DDT	50-29-3	Industrial	China	Asia	LX
Dechlorane Plus	13560-89-9 135821-03-3 135821-74-8	Industrial	China	Asia	LX
Demeton-S-methyl	919-86-8	Pesticide	Maldives	Asia	LIV
Demeton-S-methyl	919-86-8	Pesticide	Oman	Near East	XXXIX
Demeton-S-methyl	919-86-8	Pesticide	Saudi Arabia	Near East	XXXVIII
Dialifos	10311-84-9	Pesticide	Mexico	Latin America and the Caribbean	XXVIII
Dibromochloropropane	96-12-8	Pesticide	China	Asia	LV
Dibromochloropropane (DBCP)	96-12-8	Pesticide	Indonesia	Asia	LVI
DBCP (1,2-dibromo-3-chloropropane)	96-12-8	Pesticide	Mexico	Latin America and the Caribbean	XXVIII

Chemical name	CAS No.	Category	Party	Region	PIC Circular
DBCP (1,2-dibromo-3-chloropropane)	96-12-8	Pesticide	Saudi Arabia	Near East	XXVII
Dichlorvos	62-73-7	Pesticide	Maldives	Asia	LIV
Dichlorvos	62-73-7	Pesticide	Saudi Arabia	Near East	XXVII
Dichlormid	37764-25-3	Pesticide	Maldives	Asia	LIV
Diclofop-methyl	51338-27-3	Pesticide	Saudi Arabia	Near East	XXXII
Dicofol	115-32-2 10606-46-9	Industrial	China	Asia	LX
Dicofol	115-32-2	Pesticide	Oman	Near East	XXXIX
Dicofol	115-32-2	Pesticide	Saudi Arabia	Near East	XXXVIII
Dicrotophos	141-66-2	Pesticide	Maldives	Asia	LIV
Dicrotophos	141-66-2	Pesticide	Oman	Near East	XXXIX
Dicrotophos	141-66-2	Pesticide	Saudi Arabia	Near East	XXVII
Diflubenzuron	35367-38-5	Pesticide	Oman	Near East	XXXIX
Dimefox	115-26-4	Pesticide	Oman	Near East	XXXIX
Dimefox	115-26-4	Pesticide	Saudi Arabia	Near East	XXVII
Dimethoate	60-51-5	Pesticide	Saudi Arabia	Near East	XXXVIII
Dimethylarsinic acid	75-60-5	Pesticide	Israel	Europe	XXXV
Dinitramine	29091-05-2	Pesticide	Mexico	Latin America and the Caribbean	XXVIII
Dinitramine	29091-05-2	Pesticide	Saudi Arabia	Near East	XXVII
Disulfoton	298-04-4	Pesticide	Maldives	Asia	LIV
Disulfoton	298-04-4	Pesticide	Oman	Near East	XXXIX
Disulfoton	298-04-4	Pesticide	Saudi Arabia	Near East	XXVII
Endrin	72-20-8	Pesticide	Maldives	Asia	LIV
Endrin	72-20-8	Pesticide	Nepal	Asia	XLII
Endrin	72-20-8	Pesticide	Mexico	Latin America and the Caribbean	XXVIII
Endrin	72-20-8	Pesticide	Saudi Arabia	Near East	XXVII
Endosulfan and its related isomers	115-29-7 959-98-8 33213-65-9 1031-07-8	Industrial	China	Asia	LX
EPN	2104-64-5	Pesticide	Saudi Arabia	Near East	XXVII
Erbon	136-25-4	Pesticide	Mexico	Latin America and the Caribbean	XXVIII
Erbon	136-25-4	Pesticide	Saudi Arabia	Near East	XXXII
Esbiothrin	84030-86-4	Pesticide	Türkiye	Europe	LVII
Ethephon	16672-87-0	Pesticide	Saudi Arabia	Near East	XXVII
Ethoprophos	13194-48-4	Pesticide	Oman	Near East	XXXIX
Ethoprophos	13194-48-4	Pesticide	Saudi Arabia	Near East	XXXVIII
Ethylan	72-56-0	Pesticide	Saudi Arabia	Near East	XXVII
Ethylmercury chloride	107-27-7	Pesticide	Armenia	Europe	XII
Ethyl <i>p</i> -nitrophenyl benzenethiophosphonate (EPN)	2104-64-5	Pesticide	Indonesia	Asia	XLI
Fenamiphos	22224-92-6	Pesticide	Oman	Near East	XXXIX
Fenamiphos	22224-92-6	Pesticide	Saudi Arabia	Near East	XXVII
Fensulfothion	115-90-2	Pesticide	Maldives	Asia	LIV
Fensulfothion	115-90-2	Pesticide	Saudi Arabia	Near East	XXVII
Fenthion	55-38-9	Pesticide	Maldives	Asia	LIV
Fenthion	55-38-9	Pesticide	Oman	Near East	XXXIX
Fipronil	120068-37-3	Pesticide	Oman	Near East	XXXIX
Flucythrinate	70124-77-5	Pesticide	Oman	Near East	XXXIX
Fluorine	7782-41-4	Pesticide	Saudi Arabia	Near East	XXVII
Fluazifop	69335-91-7	Pesticide	Türkiye	Europe	LVII

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Folpet	133-07-3	Pesticide	Saudi Arabia	Near East	XXVII
Fonofos	944-22-9	Pesticide	Maldives	Asia	LIV
Fonofos	944-22-9	Pesticide	Oman	Near East	XXXIX
Fonofos	944-22-9	Pesticide	Saudi Arabia	Near East	XXVII
Formothion	2540-82-1	Pesticide	Mexico	Latin America and the Caribbean	XXVIII
Fosthietan	21548-32-3	Pesticide	Oman	Near East	XXXIX
Fosthietan	21548-32-3	Pesticide	Saudi Arabia	Near East	XXVII
Gliflor	865-71-2	Pesticide	China	Asia	LV
Granosan-M	2235-25-8	Pesticide	Armenia	Europe	XII
Hexachlorobutadiene	87-68-3	Industrial	China	Asia	LX
Hexaethyl tetra phosphate	757-58-4	Pesticide	Saudi Arabia	Near East	XXVII
Hydrogen cyanide	74-90-8	Pesticide	Saudi Arabia	Near East	XXVII
Imazamethabenz-methyl	69969-22-8	Pesticide	Türkiye	Europe	LVII
Lead arsenate	7784-40-9	Pesticide	Togo	Africa	XLII
Lead arsenate	7784-40-9	Pesticide	Thailand	Asia	XX
Leptophos	21609-90-5	Pesticide	Saudi Arabia	Near East	XXVII
Linuron	330-55-2	Pesticide	Oman	Near East	XXXIX
Mancozeb	8018-01-7	Pesticide	Saudi Arabia	Near East	XXXVIII
Mephosfolan	950-10-7	Pesticide	Maldives	Asia	LIV
Mephosfolan	950-10-7	Pesticide	Oman	Near East	XXXIX
Mephosfolan	950-10-7	Pesticide	Saudi Arabia	Near East	XXVII
Metham sodium	137-42-8	Pesticide	Saudi Arabia	Near East	XXVII
Methidathion	950-37-8	Pesticide	Maldives	Asia	LIV
Methidathion	950-37-8	Pesticide	Oman	Near East	XXXIX
Methiocarb	2032-65-7	Pesticide	Saudi Arabia	Near East	XXXVIII
Methomyl	16752-77-5	Pesticide	Maldives	Asia	LIV
Methomyl	16752-77-5	Pesticide	Saudi Arabia	Near East	XXXVIII
Methoxychlor	72-43-5	Pesticide	Oman	Near East	XXXIX
Methoxychlor	72-43-5	Pesticide	Saudi Arabia	Near East	XXXVIII
Methyl bromide	74-83-9	Pesticide	Maldives	Asia	LIV
Methyl parathion	298-00-0	Pesticide	Cameroon	Africa	XVIII
Methyl parathion	298-00-0	Pesticide	Peru	Latin America and the Caribbean	XLVIII
Mevinphos	7786-34-7	Pesticide	Maldives	Asia	LIV
Mevinphos	7786-34-7	Pesticide	Oman	Near East	XXXIX
Mevinphos	7786-34-7	Pesticide	Saudi Arabia	Near East	XXVII
MGK Repellent 11	126-15-8	Pesticide	Thailand	Asia	XX
Mirex	2385-85-5	Industrial	China	Asia	LX
Mirex	2385-85-5	Pesticide	Nepal	Asia	XLII
Mirex	2385-85-5	Pesticide	El Salvador	Latin America and the Caribbean	XXVII
Mirex	2385-85-5	Pesticide	Maldives	Asia	LIV
Mirex	2385-85-5	Pesticide	Mexico	Latin America and the Caribbean	XXVIII
Mirex	2385-85-5	Pesticide	Peru	Latin America and the Caribbean	XXXVI
Mirex	2385-85-5	Pesticide	Saudi Arabia	Near East	XXVII
Monuron	150-68-5	Pesticide	Mexico	Latin America and the Caribbean	XXVIII
N,N'-Methylene bis-(2-amino-1,3,4-thiadiazole)	26907-37-9	Pesticide	China	Asia	LV
Naled	300-76-5	Pesticide	Maldives	Asia	LIV
Nicotine	54-11-5	Pesticide	Oman	Near East	XXXIX
Nitrofen	1836-75-5	Pesticide	Maldives	Asia	LIV

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Nitrofen	1836-75-5	Pesticide	China	Asia	LV
Nitrofen	1836-75-5	Pesticide	Mexico	Latin America and the Caribbean	XXVIII
Oxydemeton-methyl	301-12-2	Pesticide	Oman	Near East	XXXIX
Oxydemeton-methyl	301-12-2	Pesticide	Saudi Arabia	Near East	XXXVIII
Paraquat	4685-14-7	Pesticide	Maldives	Asia	LIV
Paraquat	4685-14-7	Pesticide	Saudi Arabia	Near East	XXXVII
Paraquat dichloride	1910-42-5	Pesticide	Oman	Near East	XXXIX
Pentachlorobenzene	608-93-5	Industrial	China	Asia	LX
Pentachlorophenol and its salts and esters	87-86-5 131-52-2 27735-64-4 3772-94-9 1825-21-4	Industrial	China	Asia	LX
Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds		Industrial	China	Asia	LX
Phenylmercury acetate	62-38-4	Pesticide	Mexico	Latin America and the Caribbean	XXVIII
Phosfolan	947-02-4	Pesticide	Saudi Arabia	Near East	XXVII
Phosphamidon	13171-21-6	Pesticide	Peru	Latin America and the Caribbean	XLVIII
Phosphonic diamide, <i>p</i> -(5-amino-3-phenyl-1 <i>H</i> -1,2,4-triazol-1-yl)- <i>N,N,N',N'</i> -tetramethyl-	1031-47-6	Pesticide	Mexico	Latin America and the Caribbean	XXVIII
Polychlorinated naphthalenes		Industrial	China	Asia	LX
Polychloroterpenes	8001-50-1	Pesticide	Saudi Arabia	Near East	XXXVII
Polyoxyethylene alkylphenol ether	9016-45-9, 26027-38-3, 9002-93-1, 9036-19-5 (list is not exhaustive)	Industrial	China	Asia	LII
Prochloraz	67747-09-5	Pesticide	European Union	Europe	LX
Propargite	2312-35-8	Pesticide	Maldives	Asia	LIV
Propargite	2312-35-8	Pesticide	Saudi Arabia	Near East	XXXVIII
Propoxur	114-26-1	Pesticide	Saudi Arabia	Near East	XXXVIII
Prothoate	2275-18-5	Pesticide	Saudi Arabia	Near East	XXVII
Quintozene	82-68-8	Pesticide	Japan	Asia	XX
Quintozene	82-68-8	Pesticide	Saudi Arabia	Near East	XXXVIII
Quintozene	82-68-8	Pesticide	Oman	Near East	XXXIX
Safrole	94-59-7	Pesticide	Thailand	Asia	XX
Schradan	152-16-9	Pesticide	Mexico	Latin America and the Caribbean	XXVIII
Schradan	152-16-9	Pesticide	Saudi Arabia	Near East	XXVII
Silatrane	29025-67-0	Pesticide	China	Asia	LV
Simazine	122-34-9	Pesticide	Oman	Near East	XXXIX
Simazine	122-34-9	Pesticide	Saudi Arabia	Near East	XXXVIII
Sodium arsenite	7784-46-5	Pesticide	Maldives	Asia	LIV
Sodium cyanide	143-33-9	Pesticide	Saudi Arabia	Near East	XXVII
Sodium dimethylarsinate	124-65-2	Pesticide	Israel	Europe	XXXV
Sodium fluoroacetate	62-74-8	Pesticide	China	Asia	LV
Sodium fluoroacetate	62-74-8	Pesticide	Mexico	Latin America and the Caribbean	XXVIII
Sodium fluoroacetate	62-74-8	Pesticide	Saudi Arabia	Near East	XXVII

Chemical name	CAS No.	Category	Party	Region	PIC Circular
Sulfotep	3689-24-5	Pesticide	Maldives	Asia	LIV
Tefluthrin	79538-32-2	Pesticide	Oman	Near East	XXXIX
TEPP	107-49-3	Pesticide	Saudi Arabia	Near East	XXVII
Tepraloxym ¹	149979-41-9	Pesticide	European Union	Europe	LVI
Tetradifon	116-29-0	Pesticide	Saudi Arabia	Near East	XXXVIII
Tetramine	80-12-6	Pesticide	China	Asia	LV
Thallium sulphate	7446-18-6	Pesticide	Maldives	Asia	LIV
Thallium sulphate	7446-18-6	Pesticide	Saudi Arabia	Near East	XXVII
Thionazin	297-97-2	Pesticide	Saudi Arabia	Near East	XXVII
Thiram	137-26-8	Pesticide	Ecuador	Latin America and the Caribbean	XLVII
Triazophos	24017-47-8	Pesticide	Maldives	Asia	LIV
Trifloxysulfuron-sodium	199119-58-9	Pesticide	Türkiye	Europe	LVII
Trimedlure	12002-53-8	Pesticide	Türkiye	Europe	LVII
Zineb	12122-67-7	Pesticide	Oman	Near East	XXXIX
Zineb	12122-67-7	Pesticide	Saudi Arabia	Near East	XXXVIII

Notes:

1. Tepraloxym was published in PIC Circular LVI (12th December 2022) verified as meeting Annex I information requirements, and included in Appendix V Part A. Upon further review, the Secretariat revised its verification to conclude that the information requirements of Annex I are not met, therefore since PIC Circular LX (12th December 2024) the notification is included in Appendix V Part B.

APPENDIX VI**INFORMATION EXCHANGE ON CHEMICALS RECOMMENDED BY THE
CHEMICAL REVIEW COMMITTEE FOR LISTING IN ANNEX III BUT FOR
WHICH THE CONFERENCE OF THE PARTIES HAS YET TO TAKE A FINAL
DECISION**

In line with decisions²¹ RC-3/3, RC-4/4, RC-6/8, RC-8/6, RC-8/7, RC-9/5 and paragraph 1 of Article 14, Appendix VI has been prepared to facilitate information exchange on chemicals that have been recommended for listing in Annex III to the Convention by the Chemical Review Committee but for which the Conference of the Parties has yet to take a final decision.

This appendix consists of two parts:

Part A provides a reference to the information that has been submitted by Parties on their decisions concerning the management of these chemicals.

Part B is a list of decisions on the import of these chemicals submitted by Parties. These import decisions are circulated for information only and do not constitute part of the legally binding PIC procedure.

Further information on these chemicals is available on the Convention website,²² including the notifications of final regulatory action and supporting documentation made available to the Chemical Review Committee and the draft decision guidance documents.

²¹ www.pic.int/tabid/1728/language/en-US/Default.aspx.

²² www.pic.int/tabid/1185/language/en-US/Default.aspx.

PART A**DECISIONS CONCERNING THE MANAGEMENT OF THE CHEMICALS RECOMMENDED BY THE CHEMICAL REVIEW COMMITTEE FOR LISTING IN ANNEX III BUT FOR WHICH THE CONFERENCE OF THE PARTIES HAS YET TO TAKE A FINAL DECISION**

The information on decisions by Parties concerning the management of the chemicals recommended by the Chemical Review Committee for listing in Annex III, for which the Conference of the Parties has not yet taken a final decision, can be found in the following webpages of the RC website www.pic.int:

- The Convention/Chemicals/Recommended for listing; and
- Countries/Country profiles, “Submissions” tab section of the respective Country profile, as indicated in the following tables.

Acetochlor (CAS No. 34256-82-1)		
PIC REGION: PARTY	CATEGORY	INFORMATION ON REGULATORY AND MANAGEMENT DECISIONS
Africa: Burkina Faso, Cabo Verde, Chad, Gambia, Guinea-Bissau, Mali, Mauritania, Niger, Senegal, Togo	Pesticide	Chemical webpage: http://www.pic.int/tabid/7596/language/en-US/Default.aspx Country profiles: http://www.pic.int/tabid/1087/language/en-US/Default.aspx
Europe: Bosnia and Herzegovina, European Union, Serbia, Türkiye	Pesticide	

Carbosulfan (CAS No. 55285-14-8)		
PIC REGION: PARTY	CATEGORY	INFORMATION ON REGULATORY AND MANAGEMENT DECISIONS
Africa: Burkina Faso, Cabo Verde, Chad, Gambia, Mauritania, Niger, Senegal, Togo	Pesticide	Chemical webpage: http://www.pic.int/tabid/5393/language/en-US/Default.aspx Country profiles: http://www.pic.int/tabid/1087/language/en-US/Default.aspx
Europe: Bosnia and Herzegovina, European Union, Serbia, Türkiye	Pesticide	

Fenthion (ultra-low volume (ULV) formulations at or above 640 g active ingredient/L) (CAS No. 55-38-9)		
PIC REGION: PARTY	CATEGORY	INFORMATION ON REGULATORY AND MANAGEMENT DECISIONS
Africa: Chad	Severely hazardous pesticide formulation	Chemical webpage: http://www.pic.int/tabid/4339/language/en-US/Default.aspx Country profile: http://www.pic.int/tabid/1087/language/en-US/Default.aspx

Liquid formulations (emulsifiable concentrate and soluble concentrate) containing paraquat dichloride at or above 276 g/L, corresponding to paraquat ion at or above 200 g/L (CAS No. 1910-42-5)		
PIC REGION: PARTY	CATEGORY	INFORMATION ON REGULATORY AND MANAGEMENT DECISIONS
Africa: Burkina Faso	Severely hazardous pesticide formulation	Chemical webpage: http://www.pic.int/tabid/2396/language/en-US/Default.aspx Country profiles: http://www.pic.int/tabid/1087/language/en-US/Default.aspx

Chrysotile asbestos (CAS No. 12001-29-5)		
PIC REGION: PARTY	CATEGORY	INFORMATION ON REGULATORY AND MANAGEMENT DECISIONS
Africa: South Africa	Industrial	Chemical webpage: http://www.pic.int/tabid/1186/language/en-US/Default.aspx Country profiles: http://www.pic.int/tabid/1087/language/en-US/Default.aspx
Asia: Iran (Islamic Republic of), Japan	Industrial	
Europe: Bulgaria, Latvia, European Union, Switzerland, Türkiye	Industrial	
Latin America and the Caribbean: Chile, El Salvador	Industrial	
North America: Canada	Industrial	
Southwest Pacific: Australia	Industrial	

PART B**IMPORT DECISIONS ON THE CHEMICALS RECOMMENDED BY THE CHEMICAL REVIEW COMMITTEE FOR LISTING IN ANNEX III BUT FOR WHICH THE CONFERENCE OF THE PARTIES HAS YET TO TAKE A FINAL DECISION**

Chrysotile asbestos (CAS No. 12001-29-5)		
PARTY	IMPORT DECISION	DATE RECEIVED
Canada	<p><u>Consent to import only subject to specified conditions:</u> <i>The Prohibition of Asbestos and Products Containing Asbestos Regulations</i> do not prohibit the:</p> <ul style="list-style-type: none"> • Import and use of asbestos in the chlor-alkali industry (until December 31, 2029); • Import, sale and use of products containing asbestos to service equipment in nuclear facilities if no technically or economically feasible asbestos-free alternative is available (until December 31, 2022); • Import, sale and use of products containing asbestos to service military equipment if no technically or economically feasible asbestos-free alternative is available (until December 31, 2022); • Import, sale and use, under the authority of a permit, of products containing asbestos to service military equipment or equipment of a nuclear facility if there was no technically or economically feasible asbestos-free alternative available at the time the permit application was submitted (after December 31, 2022); • Import, sale and use of military equipment serviced with a product containing asbestos while it was outside of Canada for the purpose of a military operation if no technically or economically feasible asbestos-free alternative is available; • Import, sale and use of asbestos and products containing asbestos for the purpose of display in a museum; • Import, sale and use of asbestos and products containing asbestos for scientific research, for sample characterization or as an analytical standard in a laboratory; • Transfer of physical possession or control of asbestos or a product containing asbestos to allow its disposal; and • Import, use and sale, under the authority of a permit, of asbestos and products containing asbestos to protect the environment or human health if there was no technically or economically feasible asbestos-free alternative available at the time the permit application was submitted. <p><u>Administrative measure:</u> <i>Prohibition of Asbestos and Products Containing Asbestos Regulations</i>. P.C. 2018-1210, 28 September, 2018, SOR/2018-196, Canada Gazette, Part 11, vol. 152, no. 21, p.3405, October 17, 2018. http://gazette.gc.ca/rp-pr/p2/2018/2018-10-17/html/sor-dors196-eng.html</p> <p>The above named regulations prohibit the import, sale and use of asbestos, as well as the manufacture, import, sale and use of products</p>	25 April 2019

Chrysotile asbestos (CAS No. 12001-29-5)		
PARTY	IMPORT DECISION	DATE RECEIVED
	<p>containing asbestos, with a limited number of exclusions, see "Other remarks" section.</p> <p><u>Other remarks:</u></p> <p>In addition to the exclusions mentioned above, the <i>Prohibition of Asbestos and Products Containing Asbestos Regulations</i> (the Regulations) do not apply to:</p> <ul style="list-style-type: none"> • Asbestos or a product containing asbestos that is in transit through Canada, from a place outside Canada to another place outside Canada. • Asbestos that is integrated into a structure or infrastructure if the integration occurred before the day on which these Regulations came into force (December 30, 2018). • A product containing asbestos used before the day on which these Regulations came into force (December 30, 2018). • Pest control products (as defined in subsection 2(1) of the <i>Pest Control Products Act</i>), as pest control products are regulated under this Act. <p>The Regulations do not apply to mining residues except for the following activities, which are prohibited:</p> <ul style="list-style-type: none"> • The sale of asbestos mining residues for use in construction and landscaping, unless the use is authorized by the province in which the construction or landscaping occurs; and <p>The use of asbestos mining residues to manufacture a product that contains asbestos.</p>	
European Union	<p><u>Consent to import only subject to specified conditions:</u></p> <p>The manufacture, placing on the market and use of chrysotile asbestos fibres and of articles containing these fibres added intentionally is prohibited. However, Member States may exempt the placing on the market and use of diaphragms containing chrysotile for existing electrolysis installations until they reach the end of their service life, or until suitable asbestos-free substitutes become available, whichever is the sooner. By 1 June 2011 Member States making use of this exemption shall provide a report to the Commission. The Commission shall ask the European Chemicals agency to prepare a dossier with a view to prohibit the placing on the market and use of diaphragms containing chrysotile.</p> <p><u>Administrative measure:</u></p> <p>The chemical was prohibited (with the one limited derogation referred to section 5.3 above) by 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 Chemicals 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 (Official Journal of the European Communities (OJ) L396 of 30 December 2006, p. 1) as amended by Commission Regulation (EC) No. 552/2009 of 22 June 2009 amending Regulation (EC) No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as regards Annex XVII (OJ L 164 of 22 June 2009, p. 7).</p>	6 October 2009

Liquid formulations (emulsifiable concentrate and soluble concentrate) containing paraquat dichloride at or above 276 g/L, corresponding to paraquat ion at or above 200 g/L (CAS No. 1910-42-5)		
PARTY	IMPORT DECISION	DATE RECEIVED
Qatar	<p><u>No consent to import</u></p> <p><u>Administrative measure:</u></p> <p>(*) Ministry of Environment to perform all the tasks and actions to protect the environment in the country, According to the law No. 30 of 2002 Article (26). Prohibiting the import or handling or transport of hazardous materials, without authorization from the competent administrative authority, and article (29) or law No. 30 of 2002 Provides (spray or prohibited the use of pesticides or other chemical compounds for agriculture, public health or other purposes but after taking into account the requirements and checks and balances defined by the regulations, to ensure that human, animal or plant or watercourses or other components of the environment directly or indirectly on the spot or future adverse impacts of pesticides or chemical compounds (*)Law No. 24 of 2010 Promulgating the Law (Regulation) of Pesticides in the States of the Cooperation Council for the Arab State of the Gulf.</p>	2 November 2015

Fenthion (ultra-low volume (ULV) formulations at or above 640 g active ingredient/L) (CAS No. 55-38-9)		
PARTY	IMPORT DECISION	DATE RECEIVED
Nigeria	<p><u>No consent to import</u></p> <p><u>Administrative measure:</u></p> <p>The final decision is based on resolutions of the national committee on chemicals management (NCCM), a body charged with the responsibilities of promoting and co-ordinated, continuous and cost efficient approach to chemicals safety and management across all sectors necessary to protect the environment, human and animal health in Nigeria.</p>	5 February 2020

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