

Proposed Control of Chemicals Under Review by Multilateral Environmental Agreements

Introduction

Singapore is a Party to the Stockholm Convention (SC) on Persistent Organic Pollutants (POPs)¹ and the Rotterdam Convention (RC) on the Prior Informed Consent (PIC) Procedure². As the Competent Authority (CA) for the implementation of the obligations to the Conventions, the National Environment Agency (NEA) reviews the SC's and RC's lists of chemicals of concern, and controls them as Hazardous Substances (HS) under the Environmental Protection and Management Act (EPMA) and EPM (Hazardous Substances) (HS) Regulations. This allows NEA to implement the necessary licensing controls to fulfil Singapore's obligations as a Party to the Conventions.

2 The SC and RC have identified 11 new chemicals for review. Singapore would like to notify WTO Members on the proposal to control these chemicals as HS under the EPMA and EPM (HS) Regulations.

Proposed Chemicals for Control

3 The 9th Conference of Parties (COP-9) for SC and RC, to be held from 28 Apr to 10 May 2019, will be considering the inclusion of these 11 new chemicals for control. Should these chemicals be included, the Parties' obligations under the SC and RC for their control would have to take effect within 1 year. The tabulation below shows a summary of the chemicals for listing as (a) a POP under the Annexes of the SC or (b) as a chemical subject to PIC procedure under Annex III of the RC. More details on the chemicals are appended in the **Annex**.

Conventions	Stockholm Convention (SC)	Rotterdam Convention (RC)	
Proposed Chemicals for Control	<u>Industrial Chemicals</u> (i) Pentadecafluorooctanoic acid (PFOA), its salts and PFOA-related compounds (ii) Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS – related compounds	<u>Industrial Chemicals</u> (i) Benzidine and its salts (ii) Bis(chloromethyl) ether	<u>Pesticide/Insecticides/Herbicides</u> (i) Acetochlor (ii) Paraquat and its salts (iii) Lambda-cyhalothrin (iv) Atrazine (v) Dinoterb (vi) Amitraz (vii) Hexazinone

¹ The Stockholm Convention on POPs is a global treaty to protect human health and the environment from chemicals that persist for long periods of time in the environment, bio-accumulate through the food chain, have the potential for long-range transboundary transport, and have harmful impacts on human health or the environment. Further info and text on the Stockholm Convention on POPs can be found on the website: <http://chm.pops.int>

² The Rotterdam Convention on the PIC Procedure aims to promote shared responsibility and cooperative efforts among parties in the international trade of certain hazardous chemicals in order to protect human health and the environment from potential harm and to contribute to their environmentally sound use. Further info and text on the Rotterdam Convention on the PIC Procedure can be found on the website: <http://www.pic.int>

Parties' Obligations under SC and RC	(a) Prohibit the production, import, export and use of the chemicals listed in Annex A of SC; (b) Restrict the production and use of chemicals listed in Annex B of SC; and (c) Reduce or eliminate the unintentional releases of chemicals listed in Annex C of SC	Regulate the international trade of the chemicals using the PIC procedure where the transboundary movement of the listed chemicals in Annex III of RC can only take place with the consent of the receiving country.
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Proposed Regulatory Control

4 In preparation for Singapore's obligation to the SC and RC when these 11 new chemicals are included in the Annexes of the Conventions, NEA intends to list these chemicals as HS for licensing control under the EPMA and EPM (HS) Regulations. These chemicals have been assessed by the SC and RC to pose environmental and health impacts which warrant controls to be taken for public health reasons.

5 NEA plans to gazette the control of these 11 new chemicals under the EPMA and EPM (HS) Regulations by June 2019. The licensing of the chemicals will take effect 6 months from the date of gazette. Importers, manufacturers and distributors of these chemicals and products containing these chemicals will then be required to apply for a HS licence/permit for the import, export, sale, store and use of the chemicals.

S/N	Chemical Name & Identity	Category	Additional Information <i>(*Please note that the list of CAS numbers is not exhaustive)</i>	Common Uses
Review under Stockholm Convention				
1	Pentadecafluorooctanoic acid (PFOA) (CAS No. 335-67-1), its salts and PFOA-related compounds	Industrial	<p>Examples of PFOA salts*:</p> <ul style="list-style-type: none"> • 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-penta-deca-fluoro-octanoic acid, ammonium salt (CAS No. 3825-26-1) • 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-penta-deca-fluoro-octanoic acid, sodium salt (CAS No. 335-95-5) • 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-penta-deca-fluoro-octanoic acid, potassium salt (CAS No. 2395-00-8) • 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-penta-deca-fluoro-octanoic acid, silver salt (CAS No. 335-93-3) • Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, chromium(3+) (CAS No. 68141-02-6) • Ethanaminium, N,N,N-triethyl-, salt with pentadecafluorooctanoic acid (1:1) (CAS No. 98241-25-9) <p>PFOA-related compounds refer to any linear or branched perfluoroheptyl derivative with the formula C7F15-X, other than PFOA and PFOA salts, and any linear or branched perfluorooctyl derivative with the formula C8F17-X.</p> <p>Examples of PFOA-related compounds*:</p> <ul style="list-style-type: none"> • Fluorotelomer alcohols 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-Heptadecafluorodecan-1-ol (CAS No. 678-39-7) 	<ul style="list-style-type: none"> • PFOA, its salts and PFOA-related compounds are commonly used in the production of fluoroelastomers and fluoropolymers. • PFOA-related compounds are commonly used as surfactants and surface treatment agents in textiles, papers and paints, firefighting foams.

S/N	Chemical Name & Identity	Category	Additional Information (*Please note that the list of CAS numbers is not exhaustive)	Common Uses
			<ul style="list-style-type: none"> Fluorotelomer acrylates, 8:2 Fluorotelomer acrylate (CAS No. 27905-45-9) Polyfluoroalkyl phosphoric acid diesters, 8:2 Fluorotelomer phosphate diester (CAS No. 678-41-1) Perfluorinated Iodides, Perfluorooctyl iodide (CAS No. 507-63-1) 	
2	Perfluorohexane sulfonic acid (PFHxS) (CAS No. 355-46-4), its salts and PFHxS – related compounds	Industrial	<p>Examples of PFHxS salts*:</p> <ul style="list-style-type: none"> Perfluorohexanesulfonate ammonium salt (CAS No. 68259-08-5) Perfluorohexanesulfonate potassium (CAS No. 3871-99-6) <p>Examples of PFHxS-related compounds*:</p> <ul style="list-style-type: none"> Perfluorohexane sulfonyl fluoride (CAS No. 423-50-7) Perfluorohexane sulfonamide (CAS No. 41997-13-1) Potassium N-ethyl-N-[(tridecafluorohexyl)sulfonyl]-glycinate (CAS No. 67584-53-6) 	<ul style="list-style-type: none"> PFHxS, its salts and PFHxS – related compounds are commonly used in consumer goods such as carpets, leather, apparel, textiles, firefighting foam, papermaking, printing inks, sealants, non-stick cookware.
Review under Rotterdam Convention				
3	Benzidine (CAS No. 92-87-5) and its salts	Industrial	<p>Example of Benzidine salts*:</p> <ul style="list-style-type: none"> Benzidine dihydrochloride (CAS No. 531-85-1) 	<ul style="list-style-type: none"> manufacture of dyes, pigments, plastic films and as a rubber compounding agent for the manufacture of rubber compounds
4	Bis(chloromethyl) ether (CAS No. 542-88-1)	Industrial	NIL	<ul style="list-style-type: none"> manufacture of polymers, surface treatment of vulcanized rubber and

S/N	Chemical Name & Identity	Category	Additional Information (*Please note that the list of CAS numbers is not exhaustive)	Common Uses
				manufacture of flame retardant fabrics
5	Dinoterb (CAS No. 1420-07-1)	Pesticide	NIL	<ul style="list-style-type: none"> used as herbicide and rodenticide
6	Amitraz (CAS No. 33089-61-1)	Pesticide	NIL	<ul style="list-style-type: none"> used as insecticide and acaricide
7	Lambda-cyhalothrin (CAS No. 91465-08-6)	Pesticide	NIL	<ul style="list-style-type: none"> used as insecticide
8	Atrazine (CAS No. 1912-24-9)	Pesticide	NIL	<ul style="list-style-type: none"> used as herbicide
9	Paraquat (CAS No. 4685-14-7) and its salts	Pesticide	Examples of Paraquat salts*: <ul style="list-style-type: none"> Paraquat dichloride (CAS No. 1910-42-5) Paraquat dichloride hydrate (CAS No. 75365-73-0) Paraquat methosulfate (CAS No. 2074-50-2) 	<ul style="list-style-type: none"> used as herbicide
10	Acetochlor (CAS No. 34256-82-1)	Pesticide	NIL	<ul style="list-style-type: none"> used as herbicide
11	Hexazinone (CAS No. 51235-04-2)	Pesticide	NIL	<ul style="list-style-type: none"> used as herbicide