ROTTERDAM CONVENTION

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

UNEP

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

Country: Guyana

SECTION 1 IDENTITY OF CHEMICAL SUBJECT TO THE FINAL REGULATORY ACTION

1.1	**Common name**	(Perfluorooctane sulfonic acid, perfluorooctane sulfonates, perfluorooctane sulfonamides and perfluorooctane sulfonyls) Perfluorooctane sulfonic acid (PFOS) Note: PFOS in general may refer to any of anionic, acid or salt forms of perfluorooctane sulfonate
1.2	**Chemical name according to an internationally recognized nomenclature (e.g. IUPAC), where such nomenclature exists**	Examples for PFOS acids 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonic acid Heptadecafluoro-1-octanesulfonic acid Perfluoro-n-octane sulfonic acid Perfluorooctane sulfonic acid Perfluorooctyl sulfonic acid
1.3	**Trade names and names of preparations**	PFOS salts Ammonium perfluorooctane sulfonate Diethanolamine perfluorooctane sulfonate Potassium perfluorooctane sulfonate Lithium perfluorooctane sulfonate PFOS Precursor Perfluorooctane sulfonyl fluoride (PFOSF)

1.4 Code numbers

1.4.1	CAS number	CAS number 45298-90-6 has recently been listed on some chemical databases as that for the PFOS anion (1-octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, ion(1-)). The acid and salts have the following CAS numbers: 8 1763-23-1 (acid)

	29081-56-9 (ammonia salt) 70225-14-8 (diethanolamine (DEA) salt) 2795-39-3 (potassium salt) 29457-72-5 (lithium salt) The precursor perflourooctane sulfonyl fluoride has the following CAS number: 307-35-7
1.4.2 Harmonized System customs code	2904 90
1.4.3 Other numbers (specify the numbering system)	RTECS KL2975000 EINECSW 203-860-0 Combined Nomenclature code of the European Union (CN code): 2904 90 20

1.5 Indication regarding previous notification on this chemical, if any

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

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

SECTION 2 FINAL REGULATORY ACTION

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

2.2 Information specific to the final regulatory action

2.2.1 Summary of the final regulatory action

Pesticides and Toxic Chemicals Control (Prohibited pesticides) **Order No.4 of 2015** made under the Pesticides and Toxic Chemicals Control Act 2000 (No 13 of 2000) Prohibits importation, sale and use of Perfluorooctane sulfonic acid, perfluorooctane sulfonates, perfluorooctane sulfonamides and perfluorooctane sulfonyls or any substance in any form containing Perfluorooctane sulfonic acid, perfluorooctane sulfonates, perfluorooctane sulfonamides and perfluorooctane sulfonyls.

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

Official Gazette of Guyana dated 2nd April, 2015.

2.2.3 Date of entry into force of the final regulatory action

2nd April, 2015.

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

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

No Known use of the chemical in Guyana Prior to the final regulatory action

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

Use or uses prohibited by the final regulatory action

No Known use of the chemical in Guyana Prior to the final regulatory action

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

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

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

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

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

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

☒ **Yes**

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

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

Reference to the Decision Guidance Document on Perfluorooctane sulfonic acid (PFOS) as prepared by UNEP and FAO

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

2.4.2.1 Is the reason for the final regulatory action relevant to human health?

☒ Yes

☐ No

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

PFOS and PFOS related substances pose potential risk to human health. In human blood samples, PFOS has been detected in the serum of occupational and general populations. PFOS bioaccumulates and binds preferentially to proteins in the plasma. Hazard Assessment concluded that PFOS is persistent, bioaccumulative and toxic in mammals. PFOS has been detected in the serum of occupational and general populations. There is a statistically significant association between PFOS exposure and bladder cancer and there appears to be an increased risk of episodes of neoplasm of the male reproductive system, the overall category of cancers and benign growths, and neoplasms of the gastrointestinal tract.

Expected effect of the final regulatory action

The possibility of risks and exposure to this chemical by humans decreased

2.4.2.2 Is the reason for the final regulatory action relevant to the environment?

☒ Yes

☐ No

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

PFOS and PFOS related substances pose potential risk to the environment.

PFOS is persistent in the environment. It does not hydrolyse, photolyse or volatilise from the aquatic environment,PFOS has been detected in fish, and in wildlife worldwide. The oral assimilation in fish and mammals and the low elimination rate, it can be concluded that PFOS poses similar environmental concerns for bioaccumulation to substances that are very bioaccumulative.

Expected effect of the final regulatory action

Reduce exposure to aquatic organism and other animals.

2.5 Other relevant information regarding the final regulatory action

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

	Quantity per year (MT)	Year
produced	NIL	
imported	NIL	
exported	NIL	
used	NIL	

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

Not Applicable

2.5.3 Other relevant information that may cover:

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

None expected since this product has not been used in the country for at least twenty years.

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

None

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

None

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

None

SECTION 3 PROPERTIES

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

International classification systems e.g. WHO, IARC, etc.	Hazard class
WHO / IPCS	1b
IARC	Not evaluated

Other classification systems e.g. EU, USEPA	Hazard class
EU	Hazard classification pursuant to Directive 67/548/EEC:Carcinogen Category 3 R40 - Limited evidence of a carcinogenic effect.Toxic for Reproduction Category 2; R61 - May cause harm to the unborn child. T; R48/25 - Toxic: danger of serious damage to health by prolonged exposure if swallowed. Xn; R20/22 - Harmful by inhalation and if swallowed. R64 - May cause harm to breastfed babies. N; R51-53 - Toxic to aquatic organisms, may

	cause long-term adverse effects in the aquatic environment. Hazard classification pursuant to Regulation (EC) 1272/2008 implementing the UN GHS: Carc. 2 - H351 - Suspected of causing cancer Repr. 1B - H360D - May damage the unborn child STOT RE 1 - H372 - Causes damage to organs through prolonged or repeated exposure Acute Tox. 4* - H332 - Harmful if inhaled Acute Tox. 4* - H302 - Harmful if swallowed Lact. - H362 - May cause harm to breast-fed children Aquatic Chronic 2 - H411 - Toxic to aquatic life with long lasting effects * = This classification shall be considered as a minimum classification.

3.2 Further information on the properties of the chemical

3.2.1 Description of physico-chemical properties of the chemical

Formula C8F17SO2X (X=OH, metal salt (O-M+), halide, amide, and other derivatives) Appearance White powder Melting point ≥ 400°C Boiling point Not calculable Vapourpressure 3.31 x 10-4 Pa at 20°C (3.27 x 10-9 atm) Henry's Law Constant 3.5 x 10-9 atm.m3/mole (pure water) 4.7 x 10-9 atm.m3/mole (freshwater) 1.4 x 10-7 atm.m3/mole (unfiltered seawater) 2.4 x 10-8 atm.m3/mole (filtered seawater) 4.43 x 10-7 atm.m3/mole at 20°C (pure water) Solubility inwater

570 mg/L (pure water)

370 mg/L (freshwater)

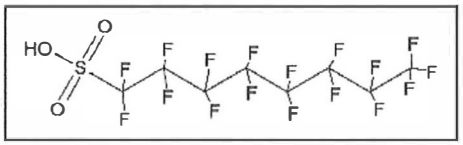
12.4 mg/L (unfiltered seawater)

25 mg/L (filtered seawater)

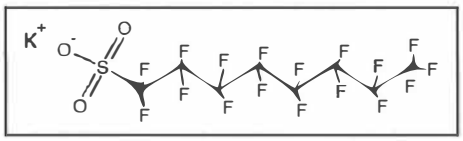
(OECD, 2002)

Chemical structure

(EA, 2004)



PFOS acid



Potassium salt

Reference

Reference to the Decision Guidance Document on Perfluorooctane sulfonic acid (PFOS) as prepared by UNEP and FAO

3.2.2 Description of toxicological properties of the chemical

LD50 (rat, oral, male);233 mg/kg bw (95% C.I. of 160-339 mg/kg bw)
LD50 (rat, oral, female); 271 mg/kg bw (95% C.I. of 200-369 mg/kg bw)
LD50 (rat, oral); 251 mg/kg bw (95% C.I. of 199-318 mg/kg bw)
LD50 (rat, oral); >50-<1500 mg/kg bw

LC50 (rat, inhalation); 5.2 mg/L (95% C.I. of 4.4 and 6.4 mg/L)

Reference

Reference to the Decision Guidance Document on Perfluorooctane sulfonic acid (PFOS) as prepared by UNEP and FAO

3.2.3 Description of ecotoxicological properties of the chemical

Soil-I A number of aerobic and anaerobic studies have concluded that PFOS is not biodegradable. Degradation of EtFOSE and MeFOSE results in the formation of PFOS anion and PFOA. A degradation study in a soil and sediment culture indicated no PFOS degradation in 20 weeks.

Water- Hydrolysis of the potassium salt of PFOS studied over a range of pH values from 1.5 to 11 showed no loss of PFOS. PFOS does not appear to photolyse. The biodegradation of PFOS was measured in a MITI-I test and no significant degradation was observed in 28 days, as net oxygen demand from degradation of parent compound, loss of total organic carbon or loss of parent compound identity.

Air- Overall, the conclusion is that PFOS itself is a substance with a very low and possibly negligible volatility. The estimated half-life is 114 days. Combined with the low volatility, this indicates that degradation in the atmosphere is not likely to be significant.

Reference

Reference to the Decision Guidance Document on Perfluorooctane sulfonic acid (PFOS) as prepared by UNEP and FAO

SECTION 4 DESIGNATED NATIONAL AUTHORITY

Institution	Pesticides and Toxic Chemicals Control Board
Address	N.A.R.E.I Compound, Mon Repos, East Coast Demerara
Name of person in charge	Trecia David
Position of person in charge	Registrar, Pesticides and Toxic Chemicals Control Board
Telephone	592-220-8880
Telefax	220-8838
E-mail address	ptccb@guyana.net.gy

PESTICIDES & TOXIC CHEMICALS REGISTRAR CONTROL BOARD

Date, signature of DNA and official seal: Trecia David 17/08/2015

PESTICIDES & TOXIC CHEMICALS CONTROL BOARD

PLEASE RETURN THE COMPLETED FORM TO:

Secretariat for the Rotterdam Convention
Food and Agriculture Organization
of the United Nations (FAO)
Viale delle Terme di Caracalla
00153 Rome, Italy
Tel: (+39 06) 5705 2188
Fax: (+39 06) 5705 3224
E-mail: pic@fao.org

OR

Secretariat for the Rotterdam Convention
United Nations Environment
Programme (UNEP)
11-13, Chemin des Anémones
CH – 1219 Châtelaine, Geneva, Switzerland
Tel: (+41 22) 917 8296
Fax: (+41 22) 917 8082
E-mail: pic@pic.int

Definitions for the purposes of the Rotterdam Convention according to Article 2:

(a) 'Chemical' means a substance whether by itself or in a mixture or preparation and whether manufactured or obtained from nature, but does not include any living organism. It consists of the following categories: pesticide (including severely hazardous pesticide formulations) and industrial;

(b) 'Banned chemical' means a chemical all uses of which within one or more categories have been prohibited by final regulatory action, in order to protect human health or the environment. It includes a chemical that has been refused approval for first-time use or has been withdrawn by industry either from the domestic market or from further consideration in the domestic approval process and where there is clear evidence that such action has been taken in order to protect human health or the environment;

(c) 'Severely restricted chemical' means a chemical virtually all use of which within one or more categories has been prohibited by final regulatory action in order to protect human health or the environment, but for which certain specific uses remain allowed. It includes a chemical that has, for virtually all use, been refused for approval or been withdrawn by industry either from the domestic market or from further consideration in the domestic approval process, and where there is clear evidence that such action has been taken in order to protect human health or the environment;

(d) 'Final regulatory action' means an action taken by a Party, that does not require subsequent regulatory action by that Party, the purpose of which is to ban or severely restrict a chemical.