Regional Workshop for Europe, Asia and Africa: POPs and Border Control. HS Codes' Classification and Practical Application

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16 October 2025

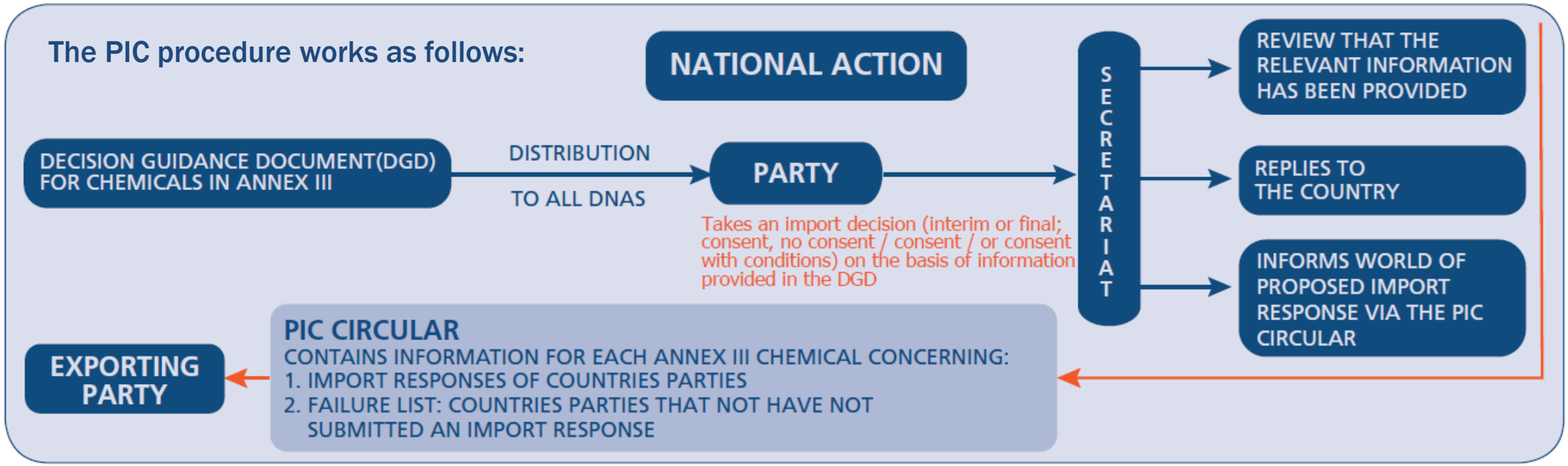
Developed under Component 4 of the Global NIP Update Project (GEF ID 10785), executed by GGKP, funded by GEF and led by UNEP

Outline of the presentation

- Overview of the Basel, Rotterdam and Stockholm Convention. Import and Export provisions
- Identification of chemicals
- Brief introduction to the Harmonized System
- Chemicals controlled under the Stockholm/Rotterdam Convention. Articles that may contain these chemicals
- HS codes of the chemicals and preparations controlled under the Stockholm and Rotterdam Conventions
- Databases and Material Safety Data Sheets for consulting chemical properties and HS codes
- How chemicals are controlled by Customs. Importance of opening national HS codes
- Illegal traffic and common smuggling methods
- Importance of cooperation between Customs, Stockholm focal points and other stakeholders

Overview of the Rotterdam Convention Import and Export procedures

THE PRIOR INFORMED CONSENT PROCEDURE



Decision guidance documents are available on the Convention website at:
https://www.pic.int/TheConvention/Chemicals/DecisionGuidanceDocuments

The Import Responses Database is available on the Convention website at:
http://www.pic.int/Procedures/ImportResponses/Database/tabid/1370/language/en-US/Default.aspx

Role of Customs in implementing the Rotterdam Convention

FOR EXPORTS

- Verify whether the chemical is listed in Annex III to the Rotterdam Convention.
- Verify the HS codes declared for the chemicals are included in the shipping document and are correct.
- If the chemical is listed in Annex III, the relevant import decision of the importing country should be checked on the import resources database on the Convention's website. If the decision is "no consent" then the export cannot proceed. If the decision is "consent under certain conditions" it may be necessary to contact the DNA in the importing country before exporting the chemical to ensure that those conditions are met.
- If the exported chemical is banned or severely restricted in the exporting country, an export notification must be provided before the first export following the country's adoption of a ban to severely restrict the chemical. After this, the export notification must be provided before the first export in any calendar year, although the requirement to notify before the export may be waived by the DNA of the importing Party, though this must be checked.

Role of Customs in implementing the Rotterdam Convention

FOR IMPORTS

- Verify whether the chemical is listed in Annex III
- Keep up-to-date regarding important government decisions on the chemical by checking the Rotterdam Convention website
- Verify whether the chemical is adequately labelled and accompanied by adequate information.
- If an export notification is needed, check whether it has been provided (this may be confirmed with the DNA).
- Verify whether a safety data sheet has been included if the chemical is used for occupational purposes. The safety data sheet should be in an internationally recognized format.
- For any doubts on these checks, customs officers should contact their DNA for further information and clarification.

Overview of the Stockholm Convention Import and Export provisions

The Stockholm Convention regulates the import and export of covered POPs, however there is no specific procedure defined under the Stockholm Convention for the international trade of POPs.

In the event the POPs fall within the scope of the Basel or the Rotterdam Conventions, then the control procedures provided by these Conventions apply to the import, transit and export, as appropriate.

The Convention regulates the export and import of intentionally produced POPs only (listed in Annexes A and B of the Convention).

Among the measures to reduce or eliminate releases from intentional production and use provided by article 3, is the obligation to ensure that any import and export of the chemicals listed in Annex A and B of the Convention complies with strict requirements.

Overview of the Stockholm Convention Import and Export provisions

FOR IMPORTS

- The chemicals listed in Annexes A and B can only be imported for the purpose of environmentally sound disposal as set forth in article 6 paragraph 1 (d); or
- For a use or purpose which is permitted for that Party under Annex A or Annex B.

ALL OTHER IMPORTS ARE PROHIBITED

Information about the Parties is available on the Stockholm Convention website https://chm.pops.int/Countries/StatusofRatifications/PartiesandSignatoires/tabid/4500/Default.aspx

FOR EXPORTS

Chemicals for which safer alternatives are not readily available to all countries and for which there is a specific exemption or acceptable purpose can only be exported:

- For the purpose of environmentally sound disposal as set forth in article 6 paragraph 1 (d); or
- To a Party which is permitted to use that chemical under Annex A or Annex B; or
- To a non-Party to the Convention which has provided an annual certification to the exporting Party. This certification shall ensure that the importing State will minimize or prevent releases, dispose the chemicals in an environmentally sound manner and respect the provisions of Annex B part II paragraph 2 for DDT production and use, where appropriate.

ALL OTHER EXPORTS ARE PROHIBITED

Overview of the Stockholm Convention Import and Export provisions

The Register of Specific Exemptions is available on the Convention website at:
http://chm.pops.int/Implementation/Exemptions/RegisterofSpecificExemptions/tabid/1133/Default.aspx

The Acceptable Purpose Registers are available at:
http://chm.pops.int/Implementation/Exemptions/AcceptablePurposesDDT/tabid/456/Default.aspx
http://chm.pops.int/Implementation/Exemptions/AcceptablePurposesPFOSandPFOSF/tabid/794/Default.aspx

FOR EXPORTS

Any export of these chemicals must take into account any relevant provisions in existing international prior informed consent instruments (article 3 paragraph 1 (b)), for instance the PIC procedures provided by the Basel and the Rotterdam Conventions.

Import and export requirements do not apply to quantities of chemicals to be used for laboratory research or as a reference standard, nor to quantities of specified chemicals occurring as unintentional trace contaminants in products and articles.

Role of Customs in implementing the Stockholm Convention

Import of dechlorane plus

Is it controlled under Rotterdam — Yes → PIC procedure

No

Specific exemption for use registered by importing Party? — No → Take measures to restrict import for purpose of environmentally sound disposal under art. 6, para. 1 (d) of the Convention

Yes

Take measures to restrict import in accordance with the provisions of Part XI of Annex A
or
For purpose of environmentally sound disposal (art. 6 para. 1 (d) of the Convention)

Part XI
Dechlorane Plus

1. The use of Dechlorane Plus shall be eliminated except for Parties that have notified the Secretariat of their intention to use it in accordance with Article 4.

2. Specific exemptions for the use of Dechlorane Plus for replacement parts for, and repair of, articles shall apply where Dechlorane Plus was originally used in the manufacture of those articles and may be available, limited to the following applications, until the end of the service life of the articles or 2044, whichever comes earlier:

(a) Aerospace (such as aircraft engine fan case rub strip products and void-filling and edge-sealing products, aircraft engine manufacturing repairs, electrical items, structural panels and aircraft cabin interiors);

(b) Space (such as satellites, probes and other exploration equipment, manned cabins and laboratories, heat-insulating materials for rocket motors and ground support equipment);

(c) Defence (such as naval vessels, missiles, launch platforms, ordnance, communication equipment, radar and lidar systems and support equipment);

(d) Motor vehicles (covering all land-based vehicles, such as cars, motorcycles, agricultural and construction vehicles and industrial trucks; applications include cables, wire harnesses, connectors and insulation tapes);

(e) Stationary industrial machines (such as tower cranes, concrete plants and hydraulic crushers; applications include cables, wire harnesses, connectors and insulation tapes) for use in agriculture, forestry and construction;

(f) Marine, garden, forestry and outdoor power equipment;

(g) Instruments for analysis, measurements, control, monitoring, testing, production and inspection.

Export of polychlorinated biphenyls

Export → Identify and take into account relevant provisions in international PIC instruments

To a Party? — No → See procedures for non-Parties

Yes

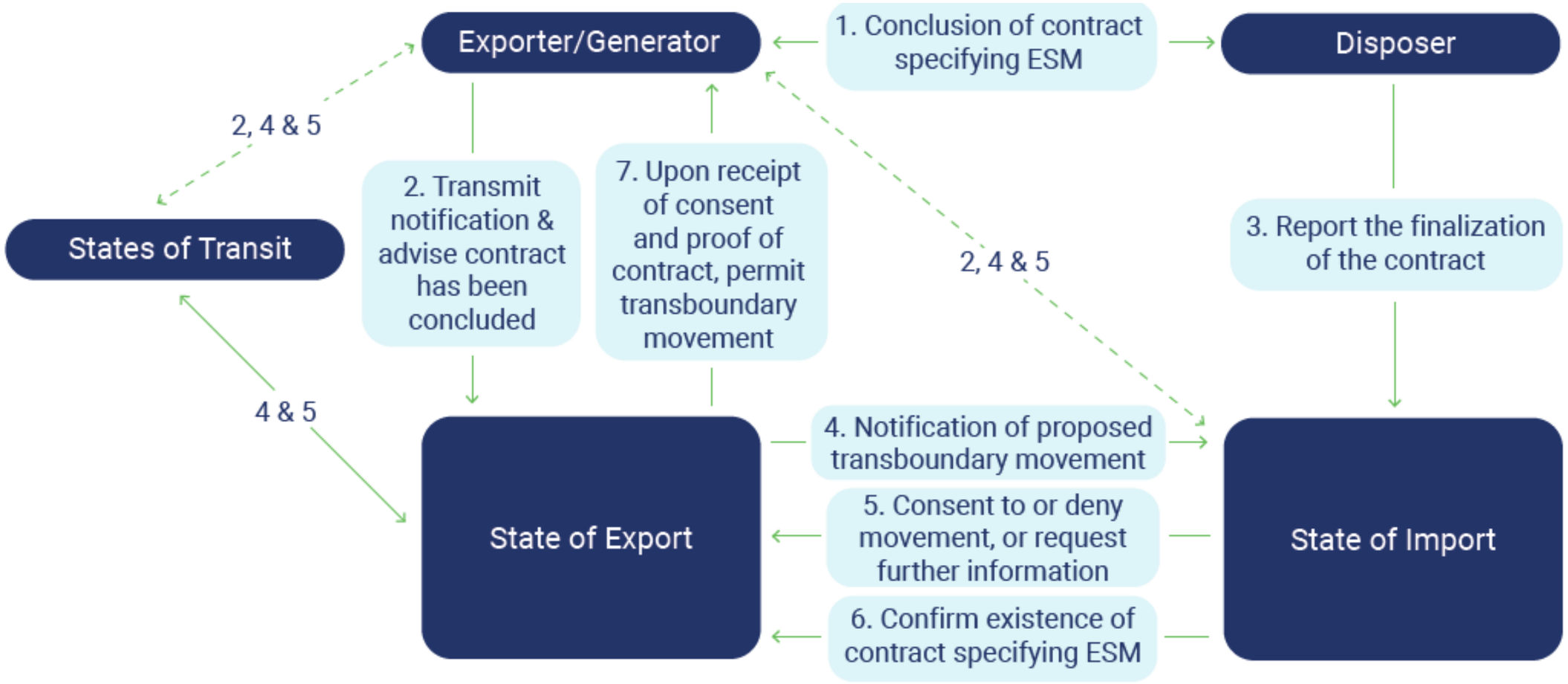
Identify if exported goods are equiptment — No → Restrict export to export of articles to be used in accordance with provisions of Part II of Annex A and/or for purpose of environmentally sound disposal

Yes

Take measures to restrict export to export for purpose of environmentally sound waste management

How the Basel Convention regulates transboundary movements

NOTIFICATION PROCEDURE



How the Basel Convention regulates transboundary movements

1. Exporter - notifier Registration No:
Name:
Address:

Contact person:
Tel: Fax:
E-mail:

2. Importer - consignee Registration No:
Name:
Address:

Contact person:
Tel: Fax:
E-mail:

8. Intended carrier(s) Registration No:
Name *(7)*:
Address:

Contact person:
Tel: Fax:
E-mail:
Means of transport *(5)*:

9. Waste generator(s) - producer(s) *(1;7;8)*
Registration No:
Name:
Address:

Contact person:
Tel: Fax:
E-mail:
Site and process of generation *(6)*:

10. Disposal facility *(2)*: ☐ or recovery facility *(2)*: ☐
Registration No:
Name:
Address:

Contact person:
Tel: Fax:
E-mail:
Actual site of disposal/recovery:

3. Notification No:
Notification concerning
A. (i) Individual shipment: ☐ (ii) Multiple shipments: ☐

B. (i) Disposal *(1)*: ☐ (ii) Recovery: ☐

C. Pre-consented recovery facility *(2;3)* Yes ☐ No ☐

4. Total intended number of shipments:

5. Total intended quantity *(4)*:
Tons (Mg):
m^3:

6. Intended period of time for shipment(s) *(4)*:
First departure: Last departure:

7. Packaging type(s) *(5)*:
Special handling requirements *(6)*: Yes: ☐ No: ☐

11. Disposal/recovery operation(s) *(2)*
D code/R code *(5)*:
Technology employed *(6)*:

Reason for export *(1;6)*:

12. Designation and composition of the waste *(6)*:

13. Physical characteristics *(5)*:

14. Waste identification (fill in relevant codes)
(i) Basel Annex VIII (or IX if applicable):
(ii) OECD code (if different from (i)):
(iii) EC list of wastes:
(iv) National code in country of export:
(v) National code in country of import:
(vi) Other (specify):
(vii) Y code:
(viii) H code *(5)*:
(ix) UN class *(5)*:
(x) UN Number:
(xi) UN Shipping name:
(xii) Customs code(s) (HS):

15. (a) Countries/States concerned, (b) Code no. of competent authorities where applicable, (c) Specific points of exit or entry (border crossing or port)

State of export - dispatch	State(s) of transit (entry and exit)						State of import - destination
(a)							
(b)							
(c)							

Notification document

Movement document

1. Corresponding to notification No:

2. Serial/total number of shipments: /

3. Exporter - notifier Registration No:
Name:

Address:

Contact person:
Tel: Fax:
E-mail:

4. Importer - consignee Registration No:
Name:

Address:

Contact person:
Tel: Fax:
E-mail:

5. Actual quantity: Tons (Mg): m^3:

6. Actual date of shipment:

7. Packaging Type(s) *(1)*: Number of packages:
Special handling requirements: *(2)* Yes: No:

8.(a) 1st carrier *(3)*:
Registration No:
Name:
Address:

Tel:
Fax:
E-mail:

8.(b) 2nd carrier:
Registration No:
Name:
Address:

Tel:
Fax:
E-mail:

8.(c) Last carrier:
Registration No:
Name:
Address:

Tel:
Fax:
E-mail:

------- To be completed by carrier's representative ------- *More than 3 carriers (2)*

Means of transport *(1)*:
Date of transfer:
Signature:

Means of transport *(1)*:
Date of transfer:
Signature:

Means of transport *(1)*:
Date of transfer:
Signature:

9. Waste generator(s) - producer(s) *(4;5;6)*:
Registration No:
Name:
Address:

Contact person:
Tel:
E-mail:
Site of generation *(2)*:

12. Designation and composition of the waste *(2)*:

13. Physical characteristics *(1)*:

10. Disposal facility **or recovery facility**
Registration No:
Name:
Address:

Contact person:
Tel: Fax:
E-mail:
Actual site of disposal/recovery *(2)*:

11. Disposal/recovery operation(s)
D code/R code *(1)*:

14.Waste identification *(fill in relevant codes)*
(i) Basel Annex VIII (or IX if applicable):
(ii) OECD code (if different from (i)):
(iii) EC list of wastes:
(iv) National code in country of export:
(v) National code in country of import:
(vi) Other (specify):
(vii) Y code:
(viii) H code *(1)*:
(ix) UN class *(1)*:
(x) UN Number:
(xi) UN Shipping name:
(xii) Customs code(s) (HS):

15. Exporter's - notifier's/generator's - producer's (4) declaration:
I certify that the above information is complete and correct to my best knowledge. I also certify that legally enforceable written contractual obligations have been entered into, that any applicable insurance or other financial guarantee is in force covering the transboundary movement and that all necessary consents have been received from the competent authorities of the countries concerned.
Name: Date: Signature:

More information about the Conventions and their import – export provisions

- The Rotterdam Convention

https://www.pic.int/

- The Stockholm Convention

https://chm.pops.int/

- The Basel Convention

https://www.basel.int/

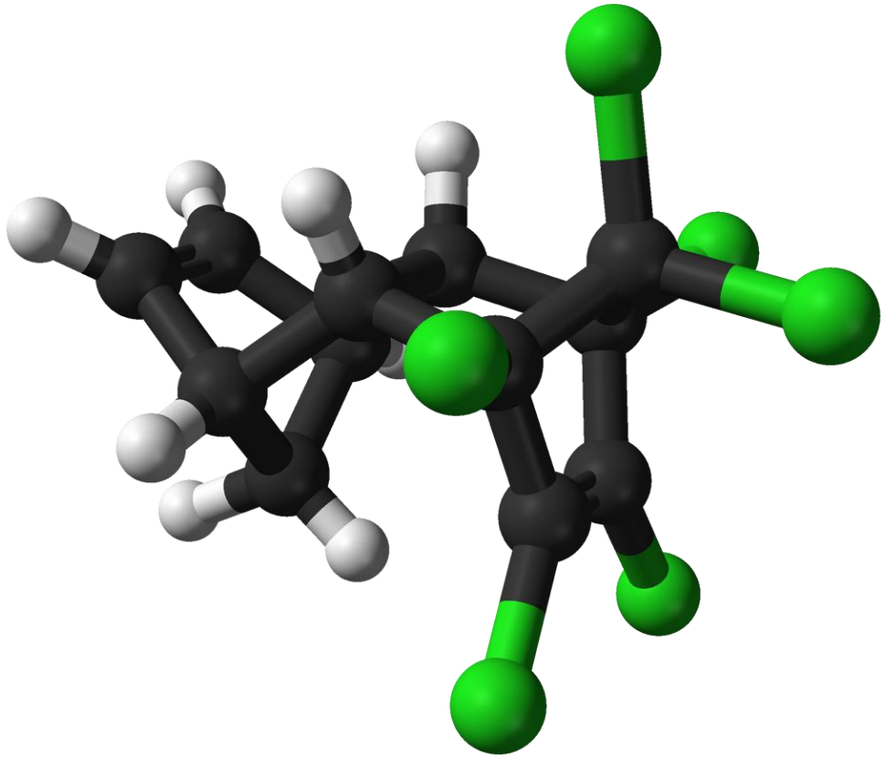
- Green Customs Initiative

https://www.greencustoms.org/

- Green Customs Guide to Multilateral Environmental Agreements

https://www.greencustoms.org/sites/default/files/2023-05/Green_customs_guide-english.pdf

Identification of chemicals



Aldrin

To control transfers and to collect data, chemicals must be identified by Customs

The identification and classification of chemicals and wastes determine whether the Prior Informed Consent (PIC) procedures or other procedures must be followed and if the import and export are allowed.

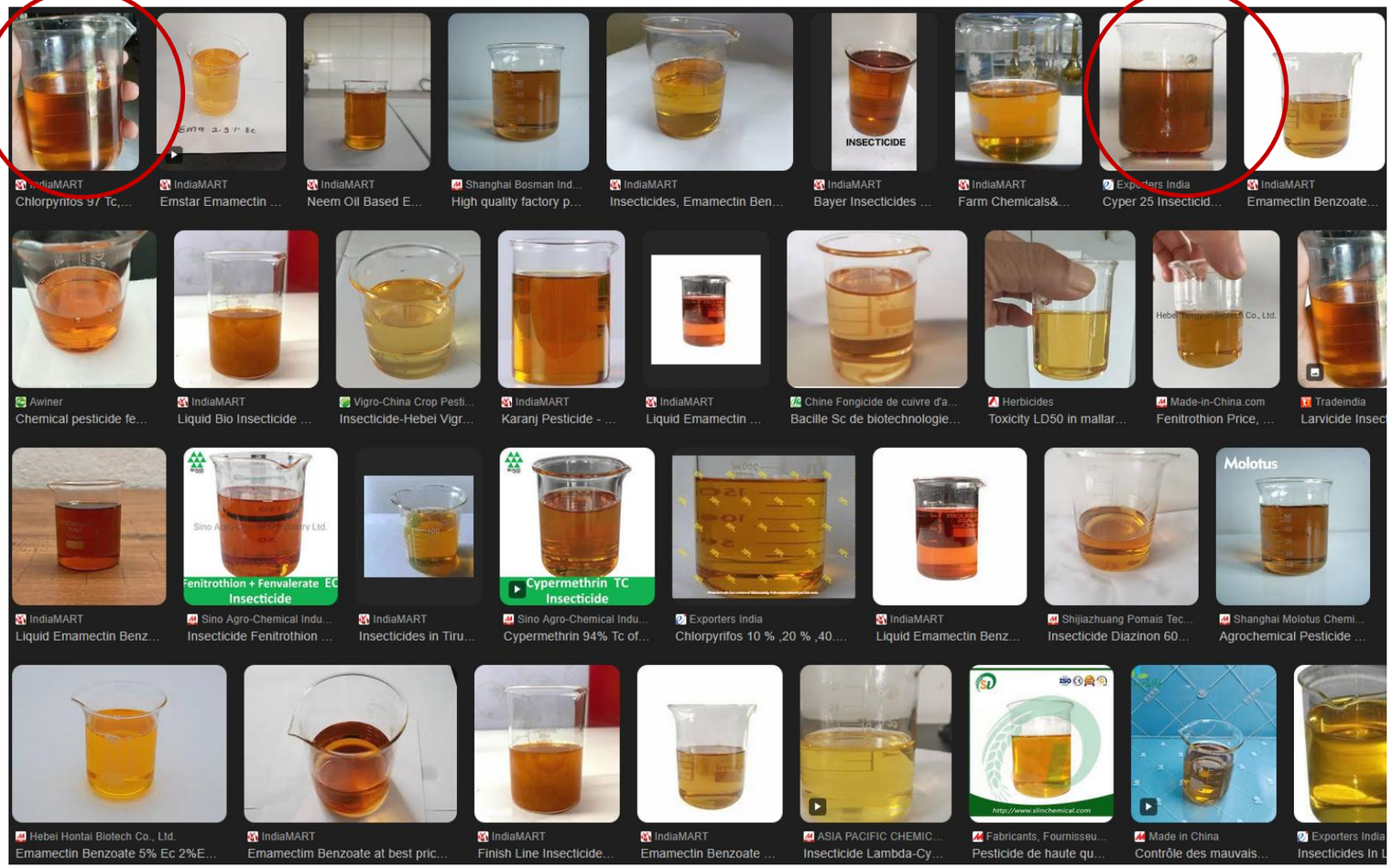
Identification of chemicals : Packaging

- Chemicals are difficult to identify by non-chemists
- They can be packaged in many different forms

Identification of chemicals: Physical appearance

- Chemicals cannot be identified purely from their physical appearance
  - Mainly colourless or yellow liquids, like thousands of other traded chemicals

Chlorpyrifos



Identification of chemicals: Analysis

- Samples can be taken and analyzed at a lab or sometimes on site, but:
  - Costly
  - Causes delays
  - Need appropriate equipment and expertise

Identification of chemicals

- Sampling and analysis can only be for suspect cases or on an occasional random basis – cannot sample every chemical product being imported or exported

- Vast majority of chemicals are transferred for legitimate purposes
  - Hence the identity will not be concealed
  - But the importer/exporter may not be aware the chemical is controlled.

- Hence on routine basis customs officers need to use chemical identifiers to identify transfers that need further examination.

Chemical identifiers: chemical name

- Chemicals are named according to different systematic nomenclatures and they have different synonyms. The “official” systematic nomenclature is the **IUPAC* name**

✓ (1R,2R,3R,6S,7S,8S)-1,8,9,10,11,11-Hexachlorotetracyclo[6.2.1.1~3,6~.0~2,7~]dodeca-4,9-diene

✓ 1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro- 1,4:5,8-dimethanonaphthalene

Aldrin

✓ (1*R*,4*S*,4a*S*,5*S*,8*R*,8a*R*)-1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-dimethanonaphthalene

***IUPAC: International Union of Pure and Applied Chemistry**

- Chemicals have many **trade names** given by their producers. Some trade names:

Examples of Trade Names

Chemical	Synonyms and trade names
Aldrin	Aldocit, Aldrec, Aldrex, Aldrex 25, Aldrex 30, Aldrex 40, Aldrin, Aldrite, Aldrosol, Altox, Andrex, Andrex 40, Bangald, Compound 118, Drinox, ENT 15,949, HHDN, Kortofin, Octalene, Rasayaldrin, SD 2794, Seedrin, Tatuzin-ho.

Chemical identifiers: ISO name

For purposes of trade, registration and legislation, and for use in popular and scientific publications, pesticides need names that are short, distinctive, non-proprietary and widely accepted.

Systematic chemical names are rarely short and are not convenient for general use;

✓ (1R,4S,4aS,5S,8R,8aR) - 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-dimethanonaphthalene

Thus, standards bodies assign common names to the active ingredients of pesticides.

The International Organization for Standardization (ISO) has assigned more than 1200 of these official common names for pesticides in different languages.

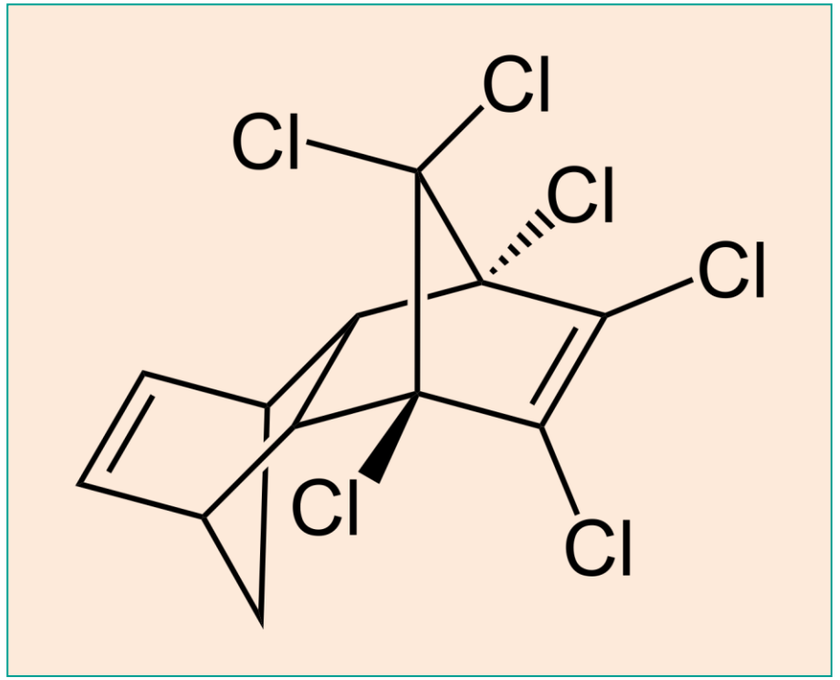
ISO Name:

Aldrin (English)
Aldrina (Spanish)
Aldrine (French)
Альдрин (Russian)

COMPENDIUM OF PESTICIDE COMMON NAMES

http://www.bcpcpesticidecompendium.org/

Chemical identifiers: Chemical structure



Aldrin

Unique identifier BUT

- Difficult for non chemists
- Not easily searchable
- Normally not included in Customs clearance documentation
- Included in Material Safety Data Sheets or technical information

Chemical identifiers: Molecular Formula

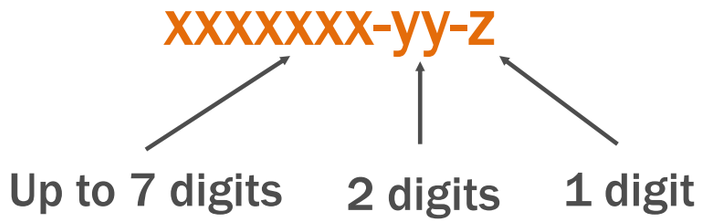
$C_{12}H_8Cl_6$

- Gives the number of each type of atom in a molecule
  - NO information on how these atoms are connected
- Many different chemicals have the SAME molecular formula
  - hence utility is limited for identification purposes

Chemical identifiers: CAS numbers

CAS 309-00-2

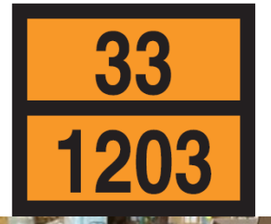
- A CAS Registry Number (CAS RN) is a unique numerical identifier assigned to a specific chemical substance by the Chemical Abstracts Service (CAS).
- It helps to eliminate confusion caused by multiple names for the same chemical by providing a single, unambiguous identifier. These numbers are crucial for accurate communication, regulatory compliance, and research in chemistry and related fields
- Each substance receives a UNIQUE CAS registry number with the following format



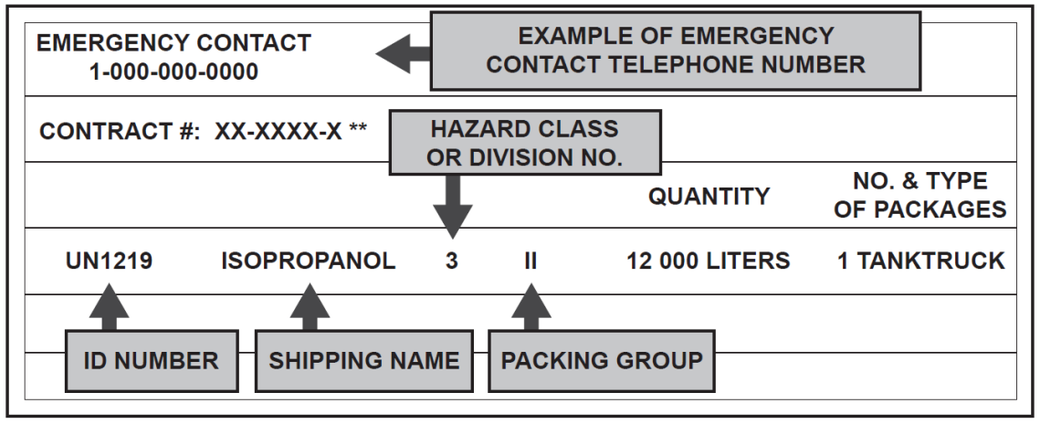
Each CAS RN uniquely identifies a chemical substance, avoiding confusion from multiple names:
CAS number for Aldrin : 309-00-2

Chemical identifiers: UN numbers

- Used for the identification of dangerous goods being transported
- Useful in some cases but most chemicals do not have unique UN number and are covered under a category with other chemicals which pose similar hazards e.g:
  Organochlorine pesticide, liquid, flammable, toxic: 2762 for Aldrin



GHS: https://unece.org/transport/dangerous-goods/ghs-rev10-2023

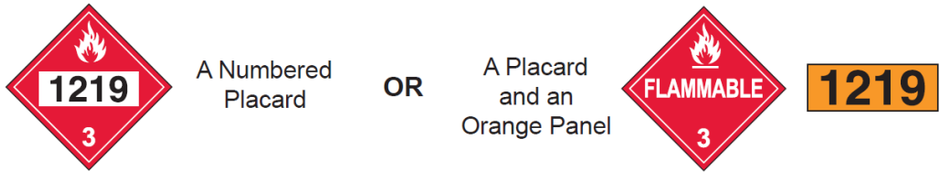


UN Numbers could be found in:

Transport of Dangerous Goods Model Regulations
https://unece.org/sites/default/files/2023-08/ST-SG-AC10-1r23e_Vol1_WEB.pdf

EXAMPLE OF PLACARD AND PANEL WITH ID NUMBER

The 4-digit ID Number may be shown on the diamond-shaped placard or on an adjacent orange panel displayed on the ends and sides of a cargo tank, vehicle or rail car.



2279	HEXACHLOROBUTADIENE		6.1
2729	HEXACHLOROBENZENE		6.1
2762	ORGANOCHLORINE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash point less than 23 °C	3	6.1

Other chemical identifiers

- Other systems for identification of chemicals available but most relatively complex and not heavily used by industry or traders, hence utility for us is limited. E.g.

  - SMILES (simplified molecular input line entry specification)

    ClC4(Cl)[C@@]2(Cl)C(/Cl)=C(/Cl)[C@]4(Cl)[C@@H]3[C@@H]\1C[C@@H](/C=C/1)[C@H]23

  - InChI (International Chemical Identifier from IUPAC)

    InChI=1S/C12H8Cl6/c13-8-9(14)11(16)7-5-2-1-4(3-5)6(7)10(8,15)12(11,17)18/h1-2,4-7H,3H2/t4-,5+,6+,7-,10+,11-

Where to find these identifiers?

- Packaging and Labelling
- Material Safety Data Sheets (MSDS)
  - Intended to provide health and safety data
  - Can provide useful information on composition
  - Normally includes names, CAS numbers and other identifiers

SAFETY DATA SHEET

TRC-A521050-10MG - Aldrin **Revision date** 25-Jul-2022

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents and container to an approved waste disposal plant

Other information
No information available.

3. Composition/information on ingredients

Substance

Formula C12 H8 Cl6

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Aldrin (ISO)	309-00-2	90 - 100%	-	

14. Transport information

TDG

UN number or ID number	UN2761
UN proper shipping name	Organochlorine pesticide, solid, toxic (Aldrin (ISO))
Transport hazard class(es)	6.1
Packing group	I
Special Provisions	16
Marine pollutant	NP.
Description	UN2761, Organochlorine pesticide, solid, toxic (Aldrin (ISO)), 6.1, I

CRITICAL IDENTIFIER FOR CUSTOMS

THE IDENTIFIER OF ANY GOOD, INCLUDING CHEMICALS, DURING CUSTOMS OPERATIONS IS

THE HARMONIZED SYSTEM CODE

Full Title

INTERNATIONAL CONVENTION ON THE HARMONIZED COMMODITY DESCRIPTION AND CODING SYSTEM

From Tariff of Egypt to Modern Nomenclature

Egyptian Customs Tariff dating back to 2000 BC
presented to the WCO by Egyptian Customs
on the occasion of the 60th anniversary
of the Organization

Tarif douanier appliqué en Egypte 2000 ans av. J.-C
offert à l'OMD par la douane égyptienne à l'occasion
du 60ème anniversaire de l'Organisation

Juin • June 2012

Tariffs have probably been in existence for as long as governments exist. Earlier tariffs were simple lists of goods and the tariff applicable

abacaxi

Harmonized System

- Multipurpose Goods Nomenclature developed by WCO
- ***163 Contracting Parties*** to the HS Convention (162 countries and the European Union) (as of Oct. 2025)
- Basis for Customs Tariffs and Trade Statistics of more than 200 countries and Customs or Economic Unions
- More than 98 % of World trade in terms of the HS
- A *universal economic language* and code for transportable goods
- Pineapple, Ananá, piña, abacaxi, 菠蘿 ⇨ 0804.30

Harmonized System

Customs tariffs

Collection of international trade statistics

Rules of Origin

Internal taxes

Trade negotiations

Transport tariffs and statistics

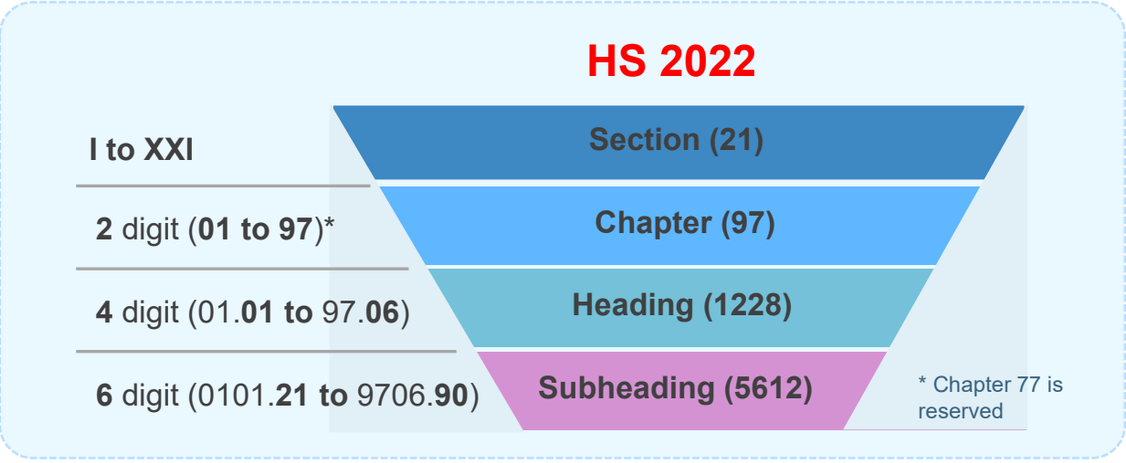
Monitoring of controlled goods

Core Customs process areas of Customs controls and procedures including risk assessment, information technology and compliance.

Other purposes

HS Convention – Annex: HS Nomenclature

- Integral part of the Convention
- Not a list of all traded goods
- System for **grouping** commodities
- **General Interpretative Rules (GIRs)**
- **Legal Notes (Section/Chapter/Subheading Notes)**
- **Headings and Subheadings (description and code)**



6-digit International level (WCO)

2903.82	--	Aldrin (ISO), chlordane (ISO) and heptachlor (ISO)

US 10-digit national level

2903.82.00	00	Aldrin (ISO), chlordane (ISO) and heptachlor (ISO).

EU 8-digit regional level

2903 82 00	--	**Aldrin (ISO), chlordane (ISO) and heptachlor (ISO)**

MERCOSUR 8-digit regional level

2903.82	- - Aldrina (ISO), clordano (ISO) y heptacloro (ISO)
2903.82.10	Aldrina
2903.82.20	Clordano
2903.82.30	Heptacloro

Uruguay 10-digit national level

2903.82	- - Aldrina (ISO), clordano (ISO) y heptacloro (ISO)
2903.82.10.00	Aldrina
2903.82.20.00	Clordano
2903.82.30.00	Heptacloro

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RAW HIDES AND SKINS, LEATHER, FURSKINS AND ARTICLES THEREOF; SADDLERY AND HARNESS; TRAVEL GOODS, HANDBAGS AND SIMILAR CONTAINERS; ARTICLES OF ANIMAL GUT (OTHER THAN SILK-WORM GUT)

SECTION IX
WOOD AND ARTICLES OF WOOD; WOOD CHARCOAL; CORK AND ARTICLES OF CORK; MANUFACTURES OF STRAW, OF ESPARTO OR OF OTHER PLAITING MATERIALS; BASKETWARE AND WICKERWORK

SECTION X
PULP OF WOOD OR OF OTHER FIBROUS CELLULOSIC MATERIAL; RECOVERED (WASTE AND SCRAP) PAPER OR PAPERBOARD; PAPER AND PAPERBOARD AND ARTICLES THEREOF

SECTION XI
TEXTILES AND TEXTILE ARTICLES

SECTION XII
FOOTWEAR, HEADGEAR, UMBRELLAS, SUN UMBRELLAS, WALKING-STICKS, SEAT-STICKS, WHIPS, RIDING-CROPS AND PARTS THEREOF; PREPARED FEATHERS AND ARTICLES MADE THEREWITH; ARTIFICIAL FLOWERS; ARTICLES OF HUMAN HAIR

Section VI

SECTION VI

PRODUCTS OF THE CHEMICAL OR ALLIED INDUSTRIES

Section Notes.

28 Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes.

Pure substances →

29 Organic chemicals.

30 Pharmaceutical products.

31 Fertilisers.

32 Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks.

33 Essential oils and resinoids; perfumery, cosmetic or toilet preparations.

34 Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepared waxes, polishing or scouring preparations, candles and similar articles, modelling pastes, "dental waxes" and dental preparations with a basis of plaster.

35 Albuminoidal substances; modified starches; glues; enzymes.

36 Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations.

37 Photographic or cinematographic goods.

Pesticides and preparations containing POPs →

38 Miscellaneous chemical products.

6 Digits: International level

The first two digits indicate the Chapter Number (Chapter 29)

The third and fourth digits indicate the position of that heading within that Chapter

Rotterdam

Stockholm

Both (PIC procedure)

Heading		
29.10		**Epoxides, epoxyalcohols, epoxyphenols and epoxyethers, with a three-membered ring, and their halogenated, sulphonated, nitrated or nitrosated derivatives.**
	2910.10	- Oxirane (ethylene oxide)
	2910.20	- Methyloxirane (propylene oxide)
	2910.30	- 1-Chloro-2,3-epoxypropane (epichlorohydrin)
	2910.40	- Dieldrin (ISO, INN)
	2910.50	- Endrin (ISO)
	2910.90	- Other

		- Derivatives containing only halogen substituents and their salts :
	2908.11	-- Pentachlorophenol (ISO)
	2908.19	-- Other

Salts of pentachlorophenol

		- Perfluorooctane sulphonic acid, its salts and perfluorooctane sulphonyl fluoride :
	2904.31	-- Perfluorooctane sulphonic acid
	2904.32	-- Ammonium perfluorooctane sulphonate
	2904.33	-- Lithium perfluorooctane sulphonate
	2904.34	-- Potassium perfluorooctane sulphonate
	2904.35	-- Other salts of perfluorooctane sulphonic acid
	2904.36	-- Perfluorooctane sulphonyl fluoride

		- Halogenated, sulphonated, nitrated or nitrosated derivatives :
	2914.71	-- Chlordecone (ISO)
	2914.79	-- Other

	2920.30	- Endosulfan (ISO)

H.S. Code		
	2903.78	-- Other perhalogenated derivatives
	2903.79	-- Other
		- Halogenated derivatives of cyclanic, cyclenic or cycloterpenic hydrocarbons :
	2903.81	-- 1,2,3,4,5,6-Hexachlorocyclohexane (HCH (ISO)), including lindane (ISO, INN)
	2903.82	-- Aldrin (ISO), chlordane (ISO) and heptachlor (ISO)
	2903.83	-- Mirex (ISO)
	2903.89	-- Other
		- Halogenated derivatives of aromatic hydrocarbons :
	2903.91	-- Chlorobenzene, *o*-dichlorobenzene and *p*-dichlorobenzene
	2903.92	-- Hexachlorobenzene (ISO) and DDT (ISO) (clofenotane (INN), 1,1,1-trichloro-2,2-bis(*p*-chlorophenyl)ethane)
	2903.93	-- Pentachlorobenzene (ISO)
	2903.94	-- Hexabromobiphenyls
	2903.99	-- Other

Polychlorinated naphthalenes

Polychlorinated biphenyls PCBs

Pesticides - Chapter 38 HS 2022

Subheading Notes.

1.- Subheadings 3808.52 and 3808.59 cover only goods of heading 38.08, containing one or more of the following substances : alachlor (ISO); aldicarb (ISO); aldrin (ISO); azinphos-methyl (ISO); binapacryl (ISO); camphechlor (ISO) (toxaphene); captafol (ISO); carbofuran (ISO); chlordane (ISO); chlordimeform (ISO); chlorobenzilate (ISO); DDT (ISO) (clofenotane (INN), 1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane); dieldrin (ISO, INN); 4,6-dinitro-o-cresol (DNOC (ISO)) or its salts; dinoseb (ISO), its salts or its esters; endosulfan (ISO); ethylene dibromide (ISO) (1,2-dibromoethane); ethylene dichloride (ISO) (1,2-dichloroethane); fluoroacetamide (ISO); heptachlor (ISO); hexachlorobenzene (ISO); 1,2,3,4,5,6-hexachlorocyclohexane (HCH (ISO)), including lindane (ISO, INN); mercury compounds; methamidophos (ISO); monocrotophos (ISO); oxirane (ethylene oxide); parathion (ISO); parathion-methyl (ISO) (methyl-parathion); pentachlorophenol (ISO), its salts or its esters; perfluorooctane sulphonic acid and its salts; perfluorooctane sulphonamides; perfluorooctane sulphonyl fluoride; phosphamidon (ISO); 2,4,5-T (ISO) (2,4,5-trichlorophenoxyacetic acid), its salts or its esters; tributyltin compounds; trichlorfon (ISO).

Heading	H.S. Code	
38.08		**Insecticides, rodenticides, fungicides, herbicides, anti-sprouting products and plant-growth regulators, disinfectants and similar products, put up in forms or packings for retail sale or as preparations or articles (for example, sulphur-treated bands, wicks and candles, and fly-papers).**
		- Goods specified in Subheading Note 1 to this Chapter :
	3808.52	-- DDT (ISO) (clofenotane (INN)), in packings of a net weight content not exceeding 300 g
	3808.59	-- Other
		- Goods specified in Subheading Note 2 to this Chapter :
	3808.61	-- In packings of a net weight content not exceeding 300 g
	3808.62	-- In packings of a net weight content exceeding 300 g but not exceeding 7.5 kg
	3808.69	-- Other
		- Other :
	3808.91	-- Insecticides
	3808.92	-- Fungicides
	3808.93	-- Herbicides, anti-sprouting products and plant-growth regulators
	3808.94	-- Disinfectants
	3808.99	-- Other

Note that all pesticides contained in Subheading Note 1 are controlled by Rotterdam and subject to PIC procedures

All other insecticides not contained in Subheading Note 1 and some from Stockholm may be classified here

Terbufos and phorate are new pesticides approved for inclusion by Rotterdam. As they are not included in Subheading Note 1, they are classified in 3808.91

Preparations - Chapter 38 HS 2022

Subheading Notes.

3.- Subheadings 3824.81 to 3824.89 cover only mixtures and preparations containing one or more of the following substances : oxirane (ethylene oxide); polybrominated biphenyls (PBBs); polychlorinated biphenyls (PCBs); polychlorinated terphenyls (PCTs); tris(2,3-dibromopropyl) phosphate; aldrin (ISO); camphechlor (ISO) (toxaphene); chlordane (ISO); chlordecone (ISO); DDT (ISO) (clofenotane (INN); 1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane); dieldrin (ISO, INN); endosulfan (ISO); endrin (ISO); heptachlor (ISO); mirex (ISO); 1,2,3,4,5,6-hexachlorocyclohexane (HCH (ISO)), including lindane (ISO, INN); pentachlorobenzene (ISO); hexachlorobenzene (ISO); perfluorooctane sulphonic acid, its salts; perfluorooctane sulphonamides; perfluorooctane sulphonyl fluoride; tetra-, penta-, hexa-, hepta- or octabromodiphenyl ethers; short-chain chlorinated paraffins.

Short-chain chlorinated paraffins are mixtures of compounds, with a chlorination degree of more than 48 % by weight, with the following molecular formula : $C_xH_{(2x-y+2)}Cl_y$, where x=10 - 13 and y= 1 – 13.

Preparations containing substances controlled by Rotterdam and Stockholm

Preparations containing substances controlled by Rotterdam

Other preparations not mentioned in Subheading Note 3 containing
Decabromodiphenyl ether;
Dechlorane Plus;
Dicofol;
Hexabromocyclododecane;
Hexachlorobutadiene;
Pentachlorophenol and its salts and esters;
Polychlorinated naphthalenes;
Medium-chain chlorinated paraffins;
etc

	- Goods specified in Subheading Note 3 to this Chapter :
3824.81	-- Containing oxirane (ethylene oxide)
3824.82	-- Containing polychlorinated biphenyls (PCBs), polychlorinated terphenyls (PCTs) or polybrominated biphenyls (PBBs)
3824.83	-- Containing tris(2,3-dibromopropyl) phosphate
3824.84	-- Containing aldrin (ISO), camphechlor (ISO) (toxaphene), chlordane (ISO), chlordecone (ISO), DDT (ISO) (clofenotane (INN), 1,1,1-trichloro-2,2-bis(*p*-chlorophenyl)ethane), dieldrin (ISO, INN), endosulfan (ISO), endrin (ISO), heptachlor (ISO) or mirex (ISO)
3824.85	-- Containing 1,2,3,4,5,6-hexachlorocyclohexane (HCH (ISO)), including lindane (ISO, INN)
3824.86	-- Containing pentachlorobenzene (ISO) or hexachlorobenzene (ISO)
3824.87	-- Containing perfluorooctane sulphonic acid, its salts, perfluorooctane sulphonamides, or perfluorooctane sulphonyl fluoride
3824.88	-- Containing tetra-, penta-, hexa-, hepta- or octabromodiphenyl ethers
3824.89	-- Containing short-chain chlorinated paraffins
	- Other :
3824.91	-- Mixtures and preparations consisting mainly of (5-ethyl-2-methyl-2-oxido-1,3,2-dioxaphosphinan-5-yl)methyl methyl methylphosphonate and bis[(5-ethyl-2-methyl-2-oxido-1,3,2-dioxaphosphinan-5-yl)methyl] methylphosphonate
3824.92	-- Polyglycol esters of methylphosphonic acid
3824.99	-- Other

Amendments HS 2028

Subheading 2930.80.

Delete and substitute :

"	-	Compounds specified in Subheading Note 3 to this Chapter :
2930.81	--	Aldicarb (ISO), captafol (ISO) and methamidophos (ISO)
2930.82	--	Phorate (ISO) and terbufos (ISO)".

2931.84	--	Trichlorfon (ISO)

CHAPTER 29.

New Subheading Note 3.

Insert the following new Subheading Note 3 to Chapter 29 :

"3.- Subheadings 2930.81 and 2930.82 cover only aldicarb (ISO), captafol (ISO), methamidophos (ISO), phorate (ISO) and terbufos (ISO).".

New subheading 2903.84.

Insert the following new subheading :

"2903.84 -- Hexabromocyclododecanes (HBCDs)".

Subheading 2909.30.

Delete and substitute :

"	-	Aromatic ethers and their halogenated, sulphonated, nitrated or nitrosated derivatives :
2909.31	--	Decabromodiphenyl ether
2909.39	--	Other".

Subheading 2915.90.

Delete and substitute :

"	-	Other :
2915.91	--	Perfluorooctanoic acids and their salts
2915.99	--	Other".

Pesticides - Chapter 38 HS 2028

Subheading Notes.

1.- Subheadings 3808.52 and 3808.59 cover only goods of heading 38.08, containing one or more of the following substances : alachlor (ISO); aldicarb (ISO); aldrin (ISO); azinphos-methyl (ISO); binapacryl (ISO); camphechlor (ISO) (toxaphene); captafol (ISO); carbofuran (ISO); chlordane (ISO); chlordimeform (ISO); chlorobenzilate (ISO); DDT (ISO) (clofenotane (INN), 1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane); dieldrin (ISO, INN); 4,6-dinitro-o-cresol (DNOC (ISO)) or its salts; dinoseb (ISO), its salts or its esters; endosulfan (ISO); ethylene dibromide (ISO) (1,2-dibromoethane); ethylene dichloride (ISO) (1,2-dichloroethane); fluoroacetamide (ISO); heptachlor (ISO); hexachlorobenzene (ISO); 1,2,3,4,5,6-hexachlorocyclohexane (HCH (ISO)), including lindane (ISO, INN); mercury compounds; methamidophos (ISO); monocrotophos (ISO); oxirane (ethylene oxide); parathion (ISO); parathion-methyl (ISO) (methyl-parathion); pentachlorophenol (ISO), its salts or its esters; perfluorooctane sulphonic acid and its salts; perfluorooctane sulphonamides; perfluorooctane sulphonyl fluoride; phorate (ISO);phosphamidon (ISO); terbufos (ISO); 2,4,5-T (ISO) (2,4,5-trichlorophenoxyacetic acid), its salts or its esters; tributyltin compounds; trichlorfon (ISO).

Heading	H.S. Code	
38.08		**Insecticides, rodenticides, fungicides, herbicides, anti-sprouting products and plant-growth regulators, disinfectants and similar products, put up in forms or packings for retail sale or as preparations or articles (for example, sulphur-treated bands, wicks and candles, and fly-papers).**
		- Goods specified in Subheading Note 1 to this Chapter :
	3808.52	-- DDT (ISO) (clofenotane (INN)), in packings of a net weight content not exceeding 300 g
	3808.59	-- Other
		- Goods specified in Subheading Note 2 to this Chapter :
	3808.61	-- In packings of a net weight content not exceeding 300 g
	3808.62	-- In packings of a net weight content exceeding 300 g but not exceeding 7.5 kg
	3808.69	-- Other
		- Other :
	3808.91	-- Insecticides
	3808.92	-- Fungicides
	3808.93	-- Herbicides, anti-sprouting products and plant-growth regulators
	3808.94	-- Disinfectants
	3808.99	-- Other

Note that all pesticides contained in Subheading Note 1 are controlled by Rotterdam and subject to PIC procedures

All other insecticides not contained in Subheading Note 1 and some from Stockholm may be classified here

Terbufos and phorate were included in Subheading Note 1
New pesticides approved by Rotterdam, not included in Subheading Note 1, are classified in 3908.91

Preparations - Chapter 38 HS 2028

Subheading Notes.

3.- Subheadings 3824.81 to 3824.89 cover only mixtures and preparations containing one or more of the following substances : oxirane (ethylene oxide); polybrominated biphenyls (PBBs); polychlorinated biphenyls (PCBs); polychlorinated terphenyls (PCTs); tris(2,3-dibromopropyl) phosphate; aldrin (ISO); camphechlor (ISO) (toxaphene); chlordane (ISO); chlordecone (ISO); DDT (ISO) (clofenotane (INN); 1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane); dieldrin (ISO, INN); endosulfan (ISO); endrin (ISO); heptachlor (ISO); mirex (ISO); 1,2,3,4,5,6-hexachlorocyclohexane (HCH (ISO)), including lindane (ISO, INN); pentachlorobenzene (ISO); hexachlorobenzene (ISO); perfluorooctane sulphonic acid, its salts; perfluorooctane sulphonamides; perfluorooctane sulphonyl fluoride; tetra-, penta-, hexa-, hepta-, octa or decabromodiphenyl ethers; hexabromocyclododecanes (HBCDs); short-chain chlorinated paraffins.

Short-chain chlorinated paraffins are mixtures of compounds, with a chlorination degree of more than 48 % by weight, with the following molecular formula : $C_xH_{(2x-y+2)}Cl_y$, where x=10 - 13 and y= 1 – 13.

Preparations containing substances controlled by Rotterdam and Stockholm

Preparations containing substances controlled by Rotterdam

Other preparations not mentioned in Subheading Note 3 containing
~~Decabromodiphenyl ether~~;
Dechlorane Plus;
Dicofol;
~~Hexabromocyclododecane~~;
Hexachlorobutadiene;
Pentachlorophenol and its salts and esters;
Polychlorinated naphthalenes;
Medium-chain chlorinated paraffins;
etc

	- Goods specified in Subheading Note 3 to this Chapter :
3824.81	-- Containing oxirane (ethylene oxide)
3824.82	-- Containing polychlorinated biphenyls (PCBs), polychlorinated terphenyls (PCTs) or polybrominated biphenyls (PBBs)
3824.83	-- Containing tris(2,3-dibromopropyl) phosphate
3824.84	-- Containing aldrin (ISO), camphechlor (ISO) (toxaphene), chlordane (ISO), chlordecone (ISO), DDT (ISO) (clofenotane (INN), 1,1,1-trichloro-2,2-bis(*p*-chlorophenyl)ethane), dieldrin (ISO, INN), endosulfan (ISO), endrin (ISO), heptachlor (ISO) or mirex (ISO)
3824.85	-- Containing 1,2,3,4,5,6-hexachlorocyclohexane (HCH (ISO)), including lindane (ISO, INN)
3824.86	-- Containing pentachlorobenzene (ISO) or hexachlorobenzene (ISO)
3824.87	-- Containing perfluorooctane sulphonic acid, its salts, perfluorooctane sulphonamides, or perfluorooctane sulphonyl fluoride , or perfluorooctanoic acids and their salts
3824.88	-- Containing tetra-, penta, hexa-, hepta-, octa- or decabromodiphenyl ether or hexabromocyclodecanes (HBCDs
3824.89	-- Containing short-chain chlorinated paraffins
	- Other :
3824.91	-- Mixtures and preparations consisting mainly of (5-ethyl-2-methyl-2-oxido-1,3,2-dioxaphosphinan-5-yl)methyl methyl methylphosphonate and bis[(5-ethyl-2-methyl-2-oxido-1,3,2-dioxaphosphinan-5-yl)methyl] methylphosphonate
3824.92	-- Polyglycol esters of methylphosphonic acid
3824.99	-- Other

List of substances and their preparations controlled under the Rotterdam and Stockholm Conventions with HS 2022 and HS 2028* codes

* Amendment will come into force on 1/1/2028

SUBSTANCES AND THEIR PREPARATIONS CONTROLLED UNDER THE ROTTERDAM CONVENTION

The Rotterdam Convention covers pesticides and industrial chemicals that have been banned or severely restricted for health or environmental reasons by Parties and which have been notified by Parties for inclusion in the Prior Informed Consent (PIC) procedure.

The PIC procedure is a mechanism for formally obtaining and disseminating the decisions of importing Parties as to whether they wish to receive future shipments of those chemicals listed in Annex III of the Convention and for ensuring compliance with these decisions by exporting Parties.

The followings are the substances controlled under the Rotterdam Convention with their HS 2022 codes :

PESTICIDES	CAS No	HS2022 HS2028	HS (Preparations)
2,4,5-T (ISO) (2,4,5 trichlorophenoxiacetic acid), and its salts and esters	93-76-5**	2918.91	3808.59
Alachlor	15972-60-8	2924.25	3808.59
Aldicarb	116-06-3	2930.80 2930.81	3808.59
Aldrin	309-00-2	2903.82	3808.59 3824.84
Azinphos-methyl	86-50-0	2933.92	3808.59
Binapacryl	485-31-4	2916.16	3808.59
Captafol	2425-06-1	2930.80 2930.81	3808.59
Carbofuran	1563-66-2	2932.96	3808.59
Chlordane	57-74-9	2903.82	3808.59 3824.84
Chlordimeform	6164-98-3	2925.21	3808.59
Chlorobenzilate	510-15-6	2918.18	3808.59
DDT	50-29-3	2903.92	3808.52 3808.59 3824.84
Dieldrin	60-57-1	2910.40	3808.59 3824.84
Dinitro-ortho-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	2908.92	3808.59
Dinoseb and its salts and esters (esters 2915.36, etc)	88-85-7**	2908.91	3808.59
Dinoseb acetate	2813-95-8	2915.36	3808.59
EDB (1,2-dibromoethane)	106-93-4	2903.62	3808.59 3811.19 3827.90
Endosulfan	115-29-7	2920.30	3808.59 3824.84
Ethylene dichloride	107-06-2	2903.15	3808.59 3827.90
Ethylene oxide	75-21-8	2910.10	3808.59 3824.81
Fluoroacetamide	640-19-7	2924.12	3808.59
HCH (mixed isomers)	608-73-1	2903.81	3808.59 3824.85
Heptachlor	76-44-8	2903.82	3808.59 3824.84
Hexachlorobenzene	118-74-1	2903.92	3808.59 3824.86
Lindane (gamma-HCH)	58-89-9	2903.81	3808.59 3824.85
Mercury compounds, including inorganic mercury compounds, alkyl mercury compounds and alkyloxyalkyl and aryl mercury compounds		2852.10	3808.59
Methamidophos	10265-92-6	2930.80 2930.81	3808.59
Monocrotophos	6923-22-4	2924.12	3808.59
Parathion	56-38-2	2920.11	3808.59
Pentachlorophenol and its salts and esters	87-86-5**	2908.11 2908.19	3808.59 3824.99
Phorate	298-02-2	2930.90 2930.82	3808.91 3808.59
Terbufos	13071-79-9	2930.90 2930.82	3808.91 3808.59
Toxaphene (camphechlor)	8001-35-2	n.a	3808.59 3824.84
Tributyl tin compounds	1461-22-9, 1983-10-4, 2155-70-6, 24124-25-2, 4342-36-3, 56-35-9, 85409-17-2	2931.20	3808.59
Trichlorfon	52-68-6	2931.54 2931.84	3808.59

Dustable powder formulations containing a combination of benomyl at or above 7%, carbofuran at or above 10% and thiram at or above 15%	137-26-8, 1563-66-2, 17804-35-2	n.a	3808.59
Methyl-parathion (Emulsifiable concentrates (EC) at or above 19.5% active ingredient and dusts at or above 1.5% active ingredient)	298-00-0	2920.11 (pure)	3808.59
Phosphamidon (Soluble liquid formulations of the substance that exceed 1000 g active ingredient/l)	13171-21-6 23783-98-4 (Z isomer) 297-99-4 (E isomer)	2924.12 (pure or isomer)	3808.59

INDUSTRIAL CHEMICAL SUBSTANCES		CAS No	HS2022 HS2028	HS (Mixtures)
Asbestos	Actinolite asbestos	77536-66-4	2524.90	6811.40
	Amosite asbestos	12172-73-5	2524.90	68.12
	Anthophyllite asbestos	77536-67-5	2524.90	6813.20
	Crocidolite asbestos	12001-28-4	2524.10	
	Tremolite asbestos	77536-68-6	2524.90	
Commercial octabromodiphenyl ether (including hexabromodiphenyl ether and heptabromodiphenyl ether)		36483-60-0 (Hexa), 68928-80-3 (Hepta)	2909.30 2909.39	3824.88
Commercial pentabromodiphenyl ether (including tetrabromodiphenyl ether and pentabromodiphenyl ether)		32534-81-9 (Penta), 40088-47-9 (Tetra)	2909.30 2909.39	3824.88
Decabromodiphenyl ether (decaBDE)		1163-19-5	2909.30 2909.31	3824.99 3824.88
Hexabromocyclododecane (HBCDs)		25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8	2903.89 2903.84	3824.99 3824.88
Perfluorooctane sulphonic acid, perfluorooctane sulphonates, perfluorooctane sulphonamides and perfluorooctane sulphonyls		1691-99-2, 1763-23-1, 24448-09-7, 251099-16-8, 2795-39-3, 29081-56-9, 29457-72-5, 307-35-7, 31506-32-8, 4151-50-2, 56773-42-3, 70225-14-8	2904.31 2904.32 2904.33 2904.34 2904.36 2922.16 2923.30 2923.40 2935.10 2935.20 2935.30 2935.40	3808.59 3824.87

SUBSTANCES AND THEIR PREPARATIONS CONTROLLED UNDER THE ROTTERDAM CONVENTION

Perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds	335-67-1	2915.90 2915.91	3824.87
Polybrominated Biphenyls (PBBs)	13654-09-6, 27858-07-7, 36355-01-8	2903.94 2903.99	3824.82
Polychlorinated Biphenyls (PCBs)	1336-36-3	2903.99	3824.82
Polychlorinated Terphenyls (PCTs)	61788-33-8	2903.99	3824.82
Short-chain chlorinated paraffins (SCCP)	85535-84-8		3824.89
Tetraethyl lead	78-00-2	2931.10	3811.11 3824.99
Tetramethyl lead	75-74-1	2931.10	3811.11 3824.99
Tributyltin compounds	1461-22-9, 1983-10-4, 2155-70-6, 24124-25-2, 4342-36-3, 56-35-9, 85409-17-2	2931.20	3808.59
Tris(2,3-dibromopropyl)phosphate	126-72-7	2919.10	3824.83

** 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.

Rows in red means that the chemical is controlled by both Rotterdam and Stockholm Conventions (subject to the PIC procedure)

Aldrin	309-00-2	2903.82	3808.59 3824.84

SUBSTANCES AND THEIR PREPARATIONS CONTROLLED UNDER THE STOCKHOLM CONVENTION

CHEMICAL ANNEX A	Category	CAS No	HS2022 HS2028	HS (Preparations)
Aldrin	Pesticide	309-00-2	2903.82	3808.59 3824.84
Chlordane	Pesticide	57-74-9	2903.82	3808.59 3824.84
Chlordecone*	Pesticide	143-50-0	2914.71	3808.91 3824.84
Chlorpyrifos*	Pesticide	2921-88-2	2933.39	3808.91 3824.99
Dechlorane Plus*	Flame retardant, particularly in electrical and electronic equipment	13560-89-9 135821-03-3 135821-74-8	2903.89	3824.99
Dicofol*	Pesticide	115-32-2 10606-46-9	2906.29	3808.91 3824.99
Dieldrin	Pesticide	60-57-1	2910.40	3808.59 3824.84
Endosulfan*	Pesticide	115-29-7 959-98-8; 33213-65-9	2920.30	3808.59 3824.84
Endrin	Pesticide	72-20-8	2910.50	3808.91 3824.84
Heptachlor	Pesticide	76-44-8	2903.82	3808.59 3824.84
Hexabromobiphenyl*	Flame retardant	36355-01-8 59536-65-1 67774-32-7	2903.94	3824.82
Hexabromocyclododecane*	Flame retardant	25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8	2903.89 2903.84	3824.99 3824.88
Tetrabromodiphenyl ether*	Flame retardant	40088-47-9 5436-43-1	2909.30 2909.39	3824.88
Pentabromodiphenyl ether*	Flame retardant	32534-81-9 60348-60-9	2909.30 2909.39	3824.88
Hexabromodiphenyl ether*	Flame retardant	68631-49-2 36483-60-0**	2909.30 2909.39	3824.88
Heptabromodiphenyl ether*	Flame retardant	446255-20-5 68928-80-3**	2909.30 2909.39	3824.88
Octabromodiphenyl ether	Flame retardant	32536-52-0	2909.30 2909.39	3824.88
Decabromodiphenyl ether* c-decaBDE	Flame retardant additive	1163-19-5	2909.30 2909.31	3824.99 3824.88
Hexachlorobenzene (HCB)	Pesticide	118-74-1	2903.92	3808.59 3824.86
Hexachlorobutadiene* (HCBD)	Solvent	87-68-3	2903.29	3824.99
Hexachlorocyclohexanes HCH*	Pesticide	608-73-1	2903.81	3808.59 3824.85
alpha-HCH*	Pesticide	319-84-6	2903.81	3808.59 3824.85
beta-HCH*	Pesticide	319-85-7	2903.81	3808.59 3824.85
gamma-HCH (Lindane)*	Pesticide	58-89-9	2903.81	3808.59 3824.85
delta-HCH	Pesticide	319-86-8	2903.81	3808.59 3824.85
Long-chain perfluorocarboxylic acids, their salts and related compounds*	Additive in several products	No info		
Mirex	Pesticide	2385-85-5	2903.83	3808.91 3824.84
Pentachlorobenzene*	Several uses	608-93-5	2903.93	3824.86
Pentachlorophenol and its salts and esters*	Pesticide	87-86-5**	2908.11 2908.19	3808.59 3824.99
Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds*	Used in several consumer goods	355-46-4	2904.99	
Polychlorinated biphenyls, (PCBs)	Industrial	1336-36-3	2903.99	3824.82
Polychlorinated naphthalenes*	Used in several applications	70776-03-3	2903.99	3824.99
Perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds*	Production of fluoro elastomers and fluoropolymers	335-67-1	2915.90 2915.91	3824.87
Short-chain chlorinated paraffins*	Additive in several products	85535-84-8; 68920-70-7; 71011-12-6; 85536-22-7; 85681-73-8; 108171-26-2		3824.89
Medium-chain chlorinated paraffins*	Additive in several products	No info		3824.99
Methoxychlor*	Pesticide	72-43-5	2909.30	3808.91
Toxaphene	Pesticide	8001-35-2		3808.59 3824.84
UV-328	Light stabilizer for plastics	25973-55-1	2933.99	3824-99

SUBSTANCES AND THEIR PREPARATIONS CONTROLLED UNDER THE STOCKHOLM CONVENTION

CHEMICAL ANNEX B	Category	CAS No	HS2022 HS2028	HS (Preparations)
DDT	Pesticide	50-29-3	**2903.92**	**3808.52** **3808.59** **3824.84**
Perfluorooctane sulphonic acid, (PFOS) its salts*: **Ammonium perfluorooctane sulphonate** **Lithium perfluorooctane sulphonate** **Potassium perfluorooctane sulphonate** **Other salts**	Used in several products	1763-23-1 29081-56-9 29457-72-5 2795-39-3	**2904.31** **2904.32** **2904.33** **2904.34** **2904.35**	**3808.59** **3824.87**
Perfluorooctane sulphonyl fluoride (PFOSF)*	Used in several products	307-35-7	**2904.36**	**3824.87**
CHEMICAL ANNEX C	**Category**	**CAS No**	**HS2022 HS2028**	**HS (Preparations)**
Hexachlorobenzene (HCB)	Industrial By-product	118-74-1	**2903.92**	**3808.59** **3824.86**
Hexachlorobutadiene* (HCBD)	By-product	87-68-3	**2903.29**	**3824.99**
Pentachlorobenzene*	Industrial By-product	608-93-5	**2903.93**	**3824.86**
Polychlorinated biphenyls, (PCBs)	Industrial By-product	1336-36-3	**2903.99**	**3824.82**
Polychlorinated dibenzo-p-dioxins (PCDDs)	By-product		**2932.99**	**3824.99**
Polychlorinated dibenzofurans (PCDFs)	By-product		**2932.99**	**3824.99**
Polychlorinated naphthalenes*	Used in several applications	70776-03-3	**2903.99**	**3824.99**

* New POPs

** 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.

Rows in red means that the chemical is controlled by both Rotterdam and Stockholm Conventions (and therefore, subject to the PIC procedure)

Aldrin	Pesticide	309-00-2	**2903.82**	**3808.59** **3824.84**

Some limitations to the HS codes as unique identifiers

- There are no enough 6-digit codes to identify each chemical
- Some chemicals fall into generic “basket” HS codes call “other”

	- Halogenated derivatives of cyclanic, cyclenic or cycloterpenic hydrocarbons :
2903.81	-- 1,2,3,4,5,6-Hexachlorocyclohexane (HCH (ISO)), including lindane (ISO, INN)
2903.82	-- Aldrin (ISO), chlordane (ISO) and heptachlor (ISO)
2903.83	-- Mirex (ISO)
2903.89	-- Other

Hexabromocyclododecanes (HBCDs)

HS 2022

HS 2028

Insert the following new subheading :

“2903.84 -- Hexabromocyclododecanes (HBCDs)”.

The amendment will be implemented in 2028!!! What could be done until then?

Unique identifiers at national/regional level

- To identify a substance not specifically mentioned at 6-digit level, such as hexabromocyclododecanes (HBCDs), the region or country could open a specific national (or regional if applicable) subheading for such substance, using as many digits as the ones used in national or regional subheadings.
- For example, the European Union use at regional level 8-digits. The EU has identified hexabromocyclododecanes (HBCDs) by expanding international subheading 2903.89 "-- Other" to regional 8-digit subheading.

	- Halogenated derivatives of cyclanic, cyclenic or cycloterpenic hydrocarbons :
2903.81	-- 1,2,3,4,5,6-Hexachlorocyclohexane (HCH (ISO)), including lindane (ISO, INN)
2903.82	-- Aldrin (ISO), chlordane (ISO) and heptachlor (ISO)
2903.83	-- Mirex (ISO)
2903.89	-- Other

HS 2022

HS 2028

Hexabromocyclododecanes (HBCDs)

Insert the following new subheading :

"2903.84 -- Hexabromocyclododecanes (HBCDs)".

	– Halogenated derivatives of cyclanic, cyclenic or cycloterpenic hydrocarbons:
2903 81 00	-- 1,2,3,4,5,6-Hexachlorocyclohexane (HCH (ISO)), including lindane (ISO, INN) .....
2903 82 00	-- Aldrin (ISO), chlordane (ISO) and heptachlor (ISO) .....
2903 83 00	-- Mirex (ISO) .....
2903 89	-- Other:
2903 89 10	--- 1,2-Dibromo-4-(1,2-dibromoethyl)cyclohexane; tetrabromocyclooctanes .....
2903 89 20	--- Hexabromocyclododecanes (HBCDs) .....

Until 2028

RECOMMENDATION OF THE CUSTOMS CO-OPERATION COUNCIL* ON THE INSERTION IN NATIONAL STATISTICAL NOMENCLATURES OF SUBHEADINGS TO FACILITATE THE COLLECTION AND COMPARISON OF DATA ON THE INTERNATIONAL MOVEMENT OF CERTAIN SUBSTANCES CONTROLLED UNDER THE ROTTERDAM CONVENTION (22 JUNE 2023)

(AMENDED 27 JUNE 2024 AND 26 JUNE 2025)

THE CUSTOMS CO-OPERATION COUNCIL,

CONSIDERING the urgent need to control and monitor the international trade of certain substances controlled under the Rotterdam Convention,

NOTING the request by the Rotterdam Convention for the collection and comparison of data on the international movement of the compounds, "hexabromocyclododecane", "phorate", "decabromodiphenyl ether", "perfluorooctanoic acids and their salts" and "terbufos"", included in the Annex III of the Convention,

RECOGNIZING that amendments to the Harmonized System Convention cannot be implemented for several years,

RECOMMENDS that Member Administrations and Contracting Parties to the Harmonized System Convention take all appropriate action to insert the following additional subdivisions in their statistical nomenclatures as soon as possible, and

REQUESTS Member Administrations and Contracting Parties to the Harmonized System Convention to notify the Secretary General of their acceptance of this Recommendation and the date of its application:

Subheading 2903.89

- - - Hexabromocyclododecanes (HBCDs)

Subheading 2909.30

- - Decabromodiphenyl ether

Subheading 2915.90

- - Perfluorooctanoic acids and their salts

Subheading 2930.90

Either:

- - Phorate (ISO)
- - Terbufos (ISO)

* The Customs Co-operation Council is the Official name of the World Customs Organization

WCO Recommendations to open specific HS codes at national level

Sources of information

- Chemspider http://www.chemspider.com or PubChem https://pubchem.ncbi.nlm.nih.gov/
- ChemID https://pubchem.ncbi.nlm.nih.gov/
- Wikipedia https://en.wikipedia.org/wiki/Main_Page
- Emergency Response Guidebookhttp://www.tc.gc.ca/eng/canutec/guide-menu-227.htm
- ECICS http://ec.europa.eu/taxation_customs/dds2/ecics/chemicalsubstance_consultation.jsp?Lang=en
- ECHA https://echa.europa.eu/home
- Material Safety Data Sheets https://chemicalsafety.com/sds-search/
- BRS website https://www.pops.int/TheConvention/ThePOPs/AllPOPs/tabid/2509/Default.aspx

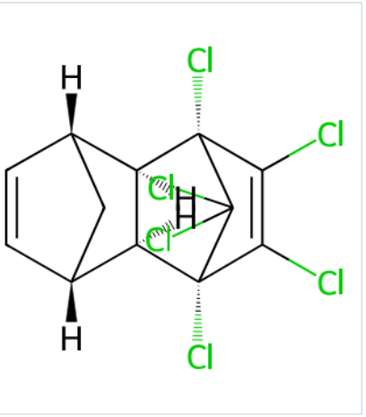
LIST ➪ CAS ➪ CHEMICAL INFORMATION ➪ HS CODES ➪ LABELLING ➪ INCIDENTS ➪ REGISTRATION

ChemSpider
Search and share chemistry

Simple Structure Advanced

Found 1 result

Search term: **309-00-2** (Found by Approved Synonyms)



Aldrin

Molecular formula: $C_{12}H_8Cl_6$

Average mass: 364.896

Monoisotopic mass: 361.875716

ChemSpider ID: 10292747

6/6 defined

Download .mol | Cite this record

+ Structural identifiers

Names | Properties | Spectra | Vendors

— Names and synonyms

Verified

(1R,2R,3R,6S,7S,8S)-1,8,9,10,11,11-Hexachlorotetracyclo[6.2.1.1~3,6~.0~2,7~]dodeca-4,9-diene *[IUPAC name – generated by ACD/Name]*

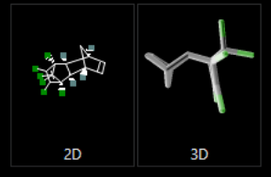
(1R,2R,3R,6S,7S,8S)-1,8,9,10,11,11-Hexachlorotétracyclo[6.2.1.1~3,6~.0~2,7~]dodéca-4,9-diène *[French]* *[IUPAC name – generated by ACD/Name]*

(1R,2R,3R,6S,7S,8S)-1,8,9,10,11,11-Hexachlortetracyclo[6.2.1.1~3,6~.0~2,7~]dodeca-4,9-dien *[German]* *[IUPAC name – generated by ACD/Name]*

(1R,4S,4aS,5S,8R,8aR)-1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-dimethanonaphthalene

COMPOUND SUMMARY

Aldrin

PubChem CID	12310947
Structure	 2D 3D
Primary Hazards	 Acute Toxic, Health Hazard, Environmental Hazard Laboratory Chemical Safety Summary (LCSS) Datasheet
Molecular Formula	$C_{12}H_8Cl_6$
Synonyms	aldrin HHDN 309-00-2 Aldocit Aldrine View More...
Molecular Weight	364.9 g/mol *Computed by PubChem 2.2 (PubChem release 2025.04.14)*
Dates	Create: 2007-02-07 Modify: 2025-08-30
Description	Aldrin can cause cancer according to an independent committee of scientific and health experts. ▸ California Office of Environmental Health Hazard Assessment (OEHHA) Aldrin, liquid appears as a solution in oil of aldrin, a noncombustible water-insoluble solid. Used as an insecticide. Mixed with a flammable carrier solvent.

Cite Download

CONTENTS

Wikipedia

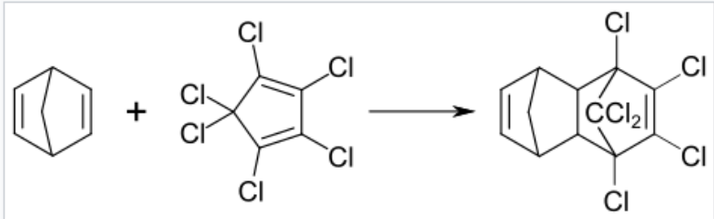
Aldrin is an organochlorine insecticide that was widely used until the 1990s, when it was banned in most countries. Aldrin is a member of the so-called "classic organochlorines" (COC) group of pesticides. COCs enjoyed a very sharp rise in popularity during and after World War II. Other noteworthy examples of COCs include dieldrin and DDT.[3] After research showed that organochlorines can be highly toxic to the ecosystem through bioaccumulation, most were banned from use. Before the ban, it was heavily used as a pesticide to treat seed and soil. Aldrin and related "cyclodiene" pesticides (a term for pesticides derived from Hexachlorocyclopentadiene) became notorious as persistent organic pollutants.[4]

Structure and Reactivity [edit]

Pure aldrin takes form as a white crystalline powder. Though it is not soluble in water (0.003% solubility), aldrin dissolves very well in organic solvents, such as ketones and paraffins.[5] Aldrin decays very slowly once released into the environment. Though it is rapidly converted to dieldrin by plants and bacteria, dieldrin maintains the same toxic effects and slow decay of aldrin.[6] Aldrin is easily transported through the air by dust particles. Aldrin does not react with mild acids or bases and is stable in an environment with a pH between 4 and 8. It is highly flammable when exposed to temperatures above 200 °C[7] In the presence of oxidizing agents aldrin reacts with concentrated acids and phenols.

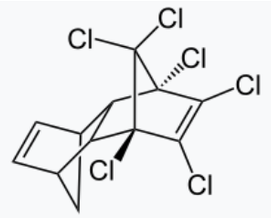
Synthesis [edit]

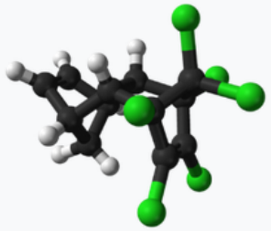
Aldrin is not formed in nature. It is named after the German chemist Kurt Alder, one of the coinventors of this kind of reaction. Aldrin is synthesized by combining hexachlorocyclopentadiene with norbornadiene in a Diels-Alder reaction to give the adduct.[8] In 1967, the composition of technical-grade aldrin was reported to consist of 90.5% of hexachlorohexahydrodimethanonaphthalene (HHDN).[6]



Synthesis of aldrin via a Diels-Alder reaction

Aldrin





Names	
Preferred IUPAC name	(1*R*,4*S*,4a*S*,5*S*,8*R*,8a*R*)-1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-dimethanonaphthalene
Other names	HHDN[1] octalene[1]

Identifiers	
CAS Number	309-00-2 ✓
3D model (JSmol)	Interactive image
ChEBI	CHEBI:2564
ChEMBL	ChEMBL195953
ChemSpider	10292747 ✓
ECHA InfoCard	100.005.652
EC Number	206-215-8
KEGG	C07552 ✓
PubChem CID	2087
RTECS number	IO2100000
UNII	OZE3CLY605 ✓
UN number	2762, 2761
CompTox Dashboard (EPA)	DTXSID8020040

InChI [hide]

InChI=1S/C12H8Cl6/c13-8-9(14)11(16)7-5-2-1-4(3-5)6(7)10(8,15)12(11,17)18/h1-2,4-7H,3H2/t4-,5+,6+,7-,10+,11- ✓

Key: QBYJBZPUGVGKQQ-SJJAEHHWSA-N ✓

InChI=1/C12H8Cl6/c13-8-9(14)11(16)7-5-2-1-4(3-5)6(7)10(8,15)12(11,17)18/h1-2,4-7H,3H2/t4-,5+,6+,7-,10+,11-

Key: QBYJBZPUGVGKQQ-SJJAEHHWBI

SMILES [show]

Properties	
Chemical formula	$C_{12}H_8Cl_6$
Molar mass	364.90 g·mol^{-1}
Appearance	Colorless solid
Density	1.60 g/mL[1]
Melting point	104 °C (219 °F; 377 K)
Solubility in water	slightly soluble (0.003%)[1]
Vapor pressure	7.5 × 10^{-5} mmHg @ 20 °C
Pharmacology	
Legal status	AU: S6 (Poison)
Hazards	
Occupational safety and health (OHS/OSH):	
Main hazards	Toxic and is a suspected human carcinogen[1]
GHS labelling:	
Pictograms	
Signal word	**Danger**
Hazard statements	H300, H301, H310, H311, H351, H372, H410
Precautionary statements	P201, P202, P260, P262, P264, P270, P273, P280, P281, P301+P310, P302+P350, P302+P352, P308+P313, P310, P312, P314, P321, P322, P330, P361, P363, P391, P405, P501
NFPA 704 (fire diamond)	
Flash point	66 °C (151 °F; 339 K)
Lethal dose or concentration (LD, LC):	
LD_{50} (median dose)	50 mg/kg (rabbit, oral) 33 mg/kg (guinea pig, oral) 39 mg/kg (rat, oral) 44 mg/kg (mouse, oral)[2]
LC_{Lo} (lowest published)	5.8 mg/m^3 (rat, 4 hr)[2]

A guidebook intended for use by first responders
during the initial phase of a transportation incident involving hazardous materials/dangerous goods

2024 EMERGENCY RESPONSE GUIDEBOOK

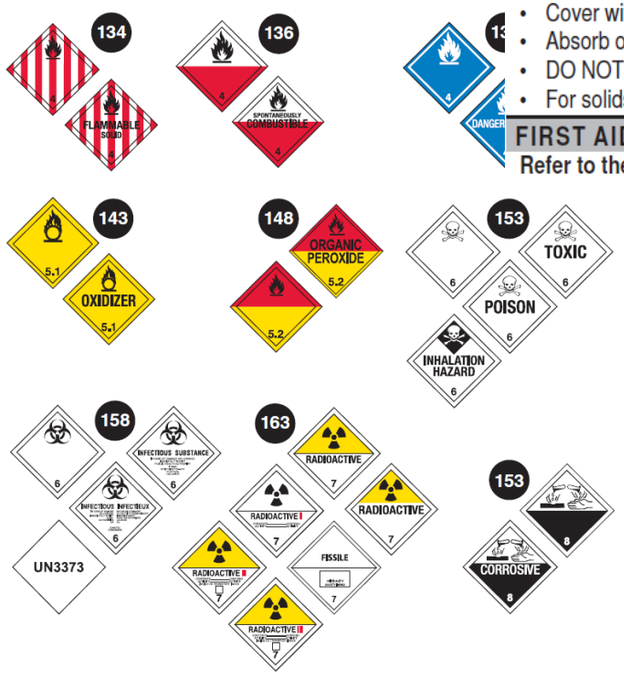
HAZARD IDENTIFICATION NUMBERS DISPLAYED ON SOME INTERMODAL CONTAINERS

Hazard identification numbers, utilized under European and some South American regulations, may be found in the top half of an orange panel on some intermodal bulk containers. The 4-digit ID number is in the bottom half of the orange panel.

The hazard identification number in the top half of the orange panel consists of two or three digits. In general, the digits indicate the following hazards:

- **2 -** Emission of gas due to pressure or to chemical reaction
- **3 -** Flammability of liquids (vapors) and gases or self-heating liquid
- **4 -** Flammability of solids or self-heating solid
- **5 -** Oxidizing (fire-intensifying) effect
- **6 -** Toxicity or risk of infection
- **7 -** Radioactivity
- **8 -** Corrosivity
- **9 -** Risk of spontaneous violent reaction

ID No.	Guide No.	Name of Material
2274	153	N-Ethyl-N-benzylaniline
2275	129	2-Ethylbutanol
2276	132	2-Ethylhexylamine
2277	130P	Ethyl methacrylate, stabilized
2278	128	n-Heptene
2279	151	Hexachlorobutadiene
2280	153	Hexamethylenediamine, solid
2281	156	Hexamethylene diisocyanate
2282	129	Hexanols



SUBSTANCES - TOXIC (NON-COMBUSTIBLE) GUIDE 151

EMERGENCY RESPONSE

FIRE

Small Fire
- Dry chemical, CO_2 or water spray.

Large Fire
- Water spray, fog or regular foam.
- If it can be done safely, move undamaged containers away from the area around the fire.
- Dike runoff from fire control for later disposal.
- Avoid aiming straight or solid streams directly onto the product.

Fire Involving Tanks, Rail Tank Cars or Highway Tanks
- Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles.
- Do not get water inside containers.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks in direct contact with flames.
- For massive fire, use unmanned master stream devices or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

SPILL OR LEAK
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- Cover with plastic sheet to prevent spreading.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- DO NOT GET WATER INSIDE CONTAINERS.
- For solids, prevent dust cloud and avoid inhalation of dust.

FIRST AID

Refer to the "General First Aid" section.

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Taxation and Customs Union

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cannot find what you are looking for, please send a message to our mailbox taxud-dds-ecics@ec.europa.eu with the maximum of information (description of the product, C
name and structure, uses, exact composition with components, safety data sheet, etc.).

The information provided in ECICS is not binding and does not give rise to protection of any kind. You may apply for a Binding Tariff Information (BTI) for a specific product
authority of any Member State of the European Union (see also Official Journal of the European Union No. C 110 of 23 March 2018, page 24 and Apply for a BTI

ECICS Consultation

Last update: 17-0

Search for chemical substance information

CAS RN	309-00-2	(ZZZZ999-99-9; wild cards: '_' or '%')
CUS		(9999999-9; wild cards: '_' or '%')
CN code		(9999999999; wild cards: '_' or '%')
EC Number		(999-999-9; wild cards: '_' or '%')
UN Number		(9999; wild cards: '_' or '%')
Name		(wild cards: '_' or '%') in English
Nomenclature	-----	
InChI		(wild cards: '_' or '%')
InChIKey		(ZZZZZZZZZZZZZZ-ZZZZZZZZZ-Z; wild cards: '_
Characteristic Choose from list	-----	
Sort order	CUS	

Submit | Clear

Translate chemical name

ECICS Consultation

Last update: 17-08-2025

Search for chemical substance information

CAS RN	309-00-2	(ZZZZ999-99-9; wild cards: '_' or '%')
CUS		(9999999-9; wild cards: '_' or '%')
CN code		(9999999999; wild cards: '_' or '%')
EC Number		(999-999-9; wild cards: '_' or '%')
UN Number		(9999; wild cards: '_' or '%')
Name		(wild cards: '_' or '%') in English
Nomenclature	-----	
InChI		(w
InChIKey		(Z
Characteristic Choose from list	-----	
Sort order	CUS	

Submit | Clear

Translate chemical name

ECICS product details

CN code	CAS RN	ECHA links
38085900	309-00-2	Infocard URL

Names

	Level	Order
+	Name	1

Characteristics

Rotterdam Convention (PIC)

Stockholm Convention (POP)

Regulation Information

Registered in REACH

Needing a safety datasheet

Included in CN annex 3

Included in CN annex 6

/ 3

List View | Thumbnail View

CUS	CN code	CAS RN	EC number	UN number	Nomen.	Name
0010309-3	29038200	309-00-2	206-215-8	2761	ISO	aldrin
0131047-0	38085900	309-00-2	206-215-8		COMMON	preparation containing ...
0151362-8	38248400	309-00-2	206-215-8		COMMON	preparation containing al...

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Search for chemicals

Search for REACH registrations

ECHA CHEM contains data submitted and processed until May 21 2025. The processing is currently paused due to adaptation to the new IUCLID have resumed normal operations as of 21 July 2025, while REACH registration dossiers will resume by mid-September 2025. Also, circa 300 regi unavailable following a technical problem and will be restored in the coming months.

We continue to develop ECHA CHEM further with several releases planned throughout the year, which will bring additional data and improvement

The information from REACH registration dossiers and C&L Inventory has moved to ECHA's new chemicals database, ECHA CHEM. REACH registration data on this page is no longer maintained; it remains frozen as of 19 May 2023.
More information on the transition to ECHA CHEM.

Access ECHA CHEM

Search for other data on chemicals

Below you can find all publicly available data on chemicals held by ECHA, other than REACH registration dossiers.

Search our data

I have read and I accept the legal notice

Search for chemicals / regulated substances

e.g. Formaldehyde, or 200-001-8 or 50-00-0, or 605-001-00-5 — Search for chemicals

Search for articles (products) in SCIP database — Search SCIP database

Please no
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IC Substance Infocard

See a problem or have feedback?

RSS

Aldrin

Regulatory process names 5 | Translated names 21 | IUPAC names 3 | Other identifiers 9

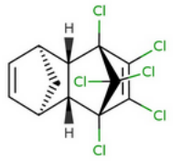
OBL

Substance identity

EC / List no.: 206-215-8

CAS no.: 309-00-2

Mol. formula: C12H8Cl6



Hazard classification & labelling

Danger! According to the **harmonised classification and labelling** (CLP00) approved by the European Union, this substance is toxic if swallowed, is toxic in contact with skin, causes damage to organs through prolonged or repeated exposure, is very toxic to aquatic life, is very toxic to aquatic life with long lasting effects and is suspected of causing cancer.

Properties of concern

C — Suspected to be Carcinogenic

POP — Persistent Organic Pollutant

More details

about INFOCARD - Last updated: 06/09/202

Key datasets

Brief Profile | REACH registered substance factsheets | C&L Inventory | Biocidal active substance factsheets | PACT tool | Regulatory Obligations

Regulatory context

Here you can find all of the regulations and regulatory lists in which this substance appears, according to the data available to ECHA. This substance has been found in the following regulatory activities (directly, or inheriting the regulatory context of a parent substance):

ECHA Legislations | Emission Limit Values (ELVs) | Other chemical legislations

Expand all | Collapse all

REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation — About

- Annex III: criteria for 1 - 10 tonne registered substances — Substances predicted as likely to meet criteria for category 1A or 1B carcinogenicity, mutagenicity, or reproductive toxicity, or with dispersive or diffuse use(s) where predicted likely to meet any classification criterion for health or environmental hazards, or where there is a nanoform soluble in biological and environmental media.
- Pre-registered substances — Substances indicated, in 2009, as being intended to be registered by at least one company in the EEA.

CLP - Classification, Labelling and Packaging — About

MSDS

Safety Data Sheet Search

Product name Aldrin

Manufacturer please enter manufacturer name

CAS # please enter CAS number

Search type Begins with

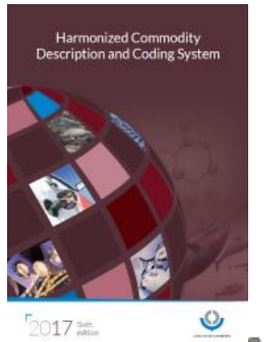
Clear Submit

Powered by Chemical Safety Software

Search results:

Product Name	Manufacturer	CAS #	CS DISTRIBUTION ID	Revision date	HTTP REF
Aldrin	Agilent	309-00-2	33442028	4/25/2019	https://www.agilent.com:443/cs/library/msds/FRSP-180A_NAEnglish.pdf
Aldrin	AK Scientific, Inc.		33390103	2/24/2019	https://aksci.com/sds/9273AF_SDS.pdf
Aldrin	Sigma Aldrich	309-00-2	33526269	8/29/2023	https://www.sigmaaldrich.com/us/en/sds/SIAL/08573
Aldrin	SPEX CertiPrep		2395546	1/30/2019	http://www.spexcertiprep.com/MSDS/S-205.pdf
Aldrin	Ultra Scientific	309-00-2	2406240	3/24/2015	URL not provided

Harmonized System



PROTECT SOCIETY AND ENVIRONMENT

Facilitate the Monitoring and Control of International Trade of Substances, such as CWC chemicals

DRUGS AND PRECURSORS

MINAMATA CONVENTION ON MERCURY

OZONE DEPLETING SUBSTANCES (ODS)

OPCW CHEMICAL WEAPONS

UNODC
United Nations Office on Drugs and Crime

CHEMICALS FOR IMPROVISED EXPLOSIVE DEVICES (IEDs)
WCO GLOBAL SHIELD PROGRAM

STOCKHOLM CONVENTION
Protecting human health and the environment from persistent organic pollutants

PERSISTENT ORGANIC POLLUTANTS (POPs)

ROTTERDAM CONVENTION
Share Responsibility

DANGEROUS PESTICIDES

Customs control

Stockholm Convention (POPs)

Rotterdam Convention (PIC)

Montreal Protocol

Basel Convention

Minamata Convention

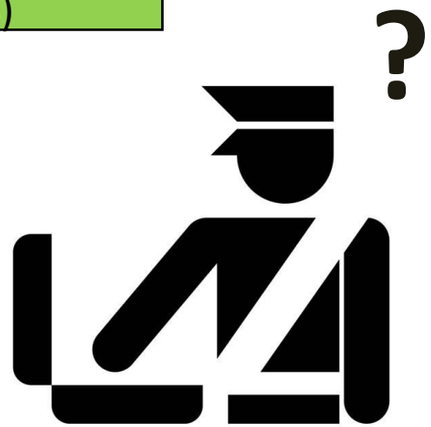
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

Convention on Narcotic drugs

Convention on Psychotropics

Fake Product ?
Intellectual Property Rights

National regulations



Regional Agreements

Tax regulations

CWC

BWC

Program Global Shield (IED)

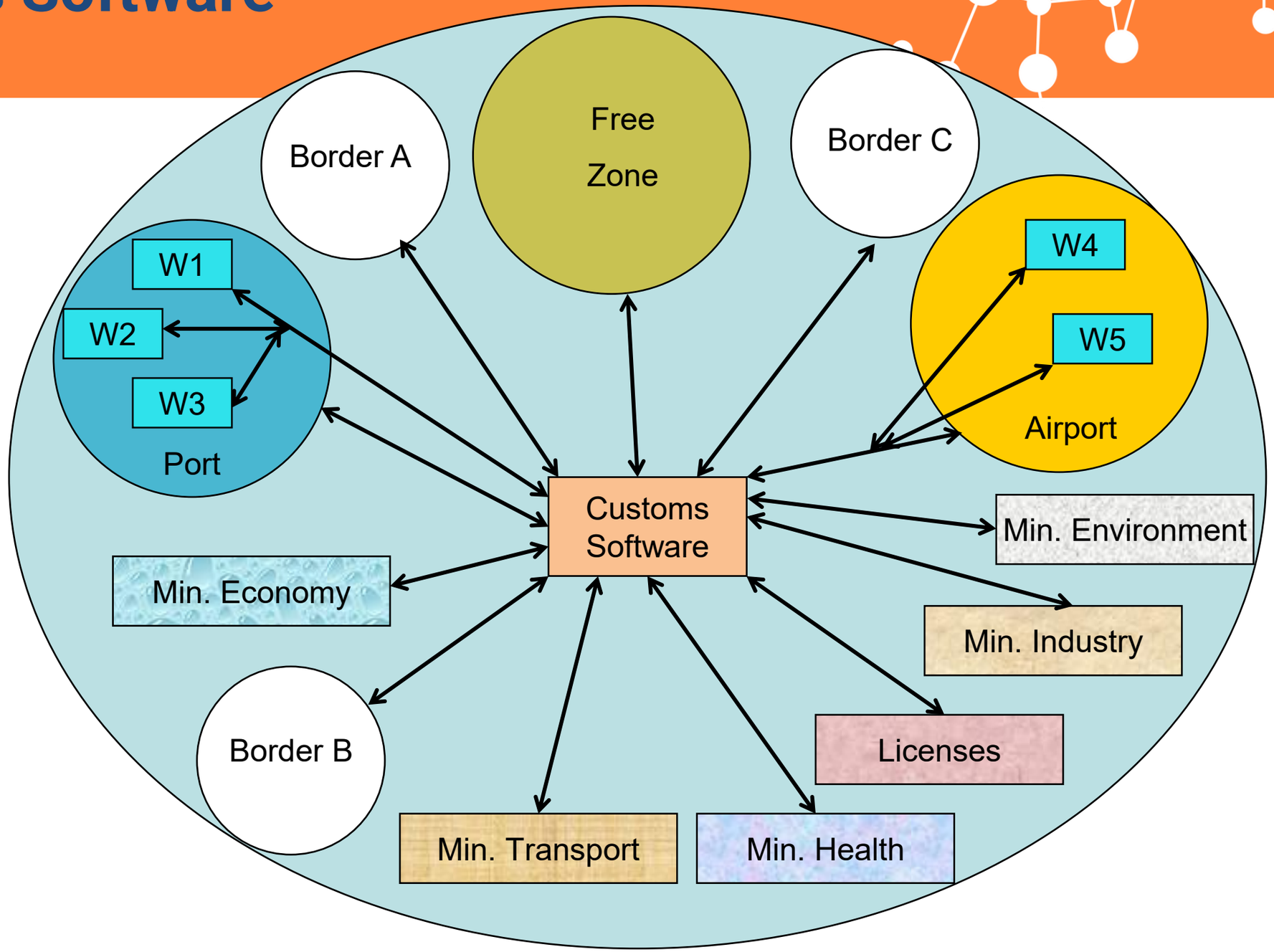
Australia Group

Wassenaar Dual-use goods

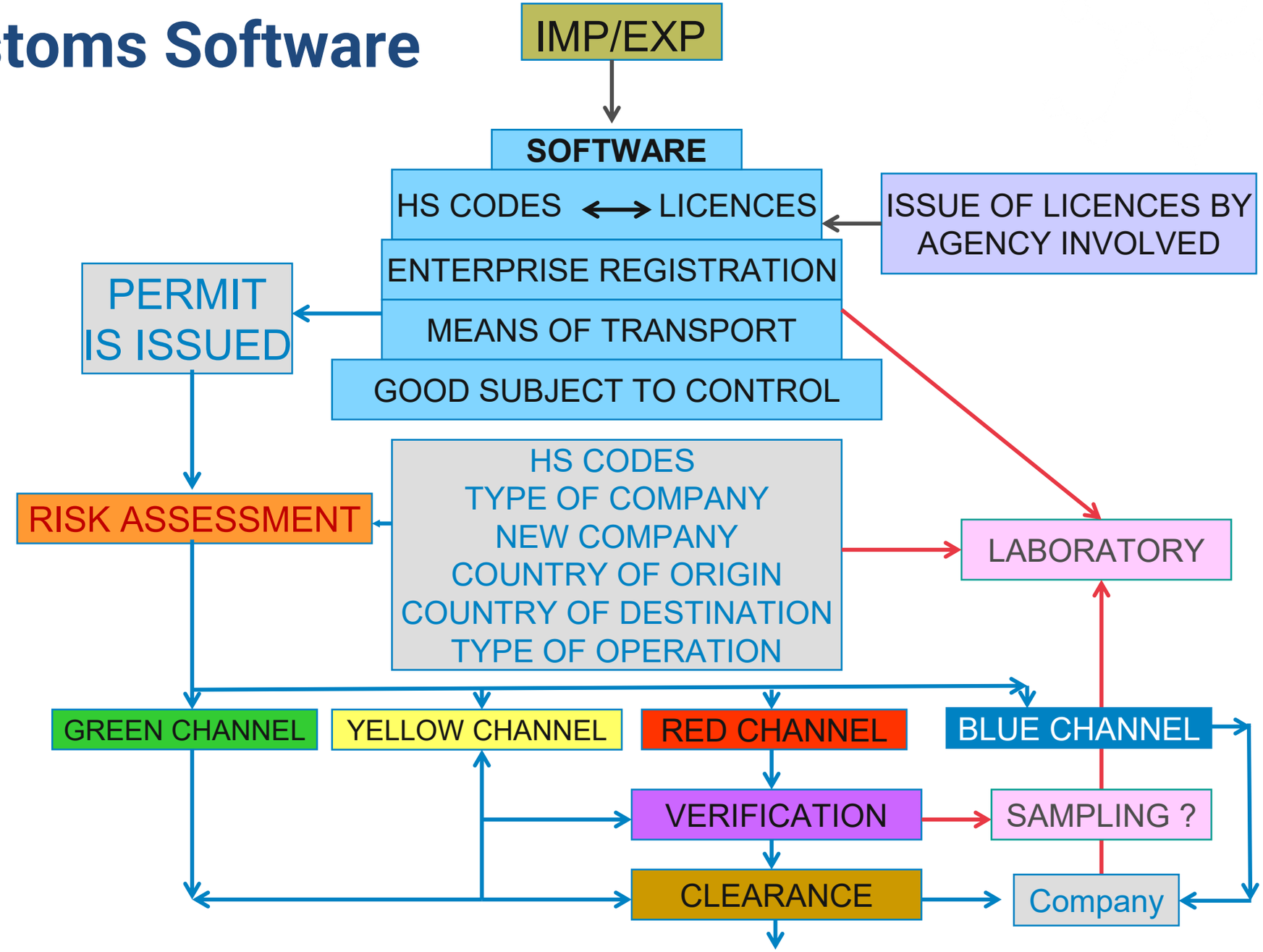
Missile Technology Control Regime

Nuclear Supplier Group

Customs Software



Customs Software



Chemicals controlled under the Stockholm/Rotterdam Conventions and their uses - Annex A

Aldrin was produced in large quantities for use as a pesticide applied to soils to kill termites, grasshoppers, corn rootworm, and other insect pests, aldrin can also kill birds, fish, and humans. Its production and use have been widely controlled because it persists in the environment, bioaccumulates in the food chain and in humans and is highly toxic to microorganisms, fish, crustaceans and many bird and animal species. Its production and use are being eliminated internationally under the Stockholm Convention.

Chlordane was used extensively to control termites and as a broad-spectrum insecticide on a range of agricultural crops. It remains in the soil for a long time and has a reported half-life of one year. The lethal effects of chlordane on fish and birds vary according to the species, but tests have shown that it can kill mallard ducks, bobwhite quail, and pink shrimp. Chlordane may affect the human immune system and is classified as a possible human carcinogen.

Chlordecone has been used in various parts of the world for the control of a wide range of pests. It has been used extensively in the tropics for the control of banana root borer. It has been used as a fly larvicide, as a fungicide against apple scab and powdery mildew, to control the Colorado potato beetle, the rust mite on non-bearing citrus, and the potato and tobacco wireworm on gladioli and other plants. Chlordecone has also been used in household products such as ant and roach traps.
Chlordecone is listed in Annex A to the Stockholm Convention without specific exemptions (decision SC-4/12).

Chemicals controlled under the Stockholm/Rotterdam Conventions and their uses - Annex A

Chlorpyrifos, which belongs to the group of organophosphate pesticides, is widely applied as an insecticide in agriculture for pest control on various crops as well as lawns and ornamental plants. Pesticide products containing chlorpyrifos are registered for use on many agricultural crops, including corn, soybeans, alfalfa, oranges, apples, bananas, wheat, and walnuts. Additionally, chlorpyrifos products are registered for use on non-food sites such as ornamental plants in nurseries, golf course turf, as a wood treatment, and as an ear tag for cattle. There are also public health uses including aerial and ground-based mosquito adulticide fogger treatments, use as fire ant control and for some tick species that may transmit diseases such as Lyme disease. At its peak, in 2008 chlorpyrifos products were authorized for use in more than 88 countries. While its production and use declined in some regions such as Europe and North America following regulatory measures such as bans or restrictions, chlorpyrifos still has a wide application range in many countries worldwide, including for termite control in buildings.

Dechlorane Plus technical mixture is a polychlorinated flame retardant that has been in use since the 1960s. It is used as an additive flame retardant in electrical wire and cable coatings, plastic roofing materials, connectors in TV and computer monitors, and as a non-plasticizing flame retardant in polymeric systems, such as nylon and polypropylene plastic.
Dechlorane Plus was originally used in the manufacture of: Aerospace (such as aircraft engine fan case rub strip products and void-filling and edge-sealing products, aircraft engine manufacturing repairs, electrical items, structural panels and aircraft cabin interiors); Defence (such as naval vessels, missiles, launch platforms, ordnance, communication equipment, radar and lidar systems and support equipment); Motor vehicles (covering all land-based vehicles, such as cars, motorcycles, agricultural and construction vehicles and industrial trucks; applications include cables, wire harnesses, connectors and insulation tapes); Medical devices (such as ultrasound diagnostic devices, magnetic resonance imaging systems, X-ray imaging systems, flexible endoscopes and radiotherapy devices and installations); In-vitro diagnostic devices (such as immunoassay analysers, haematology analysers, polymerase chain reaction (PCR) testing systems, genetic analysers, clinical chemistry analysers, blood coagulation analysers and urinalysis analysers). **See UNEP/POPS/POPRC.16/INF/19**

Chemicals controlled under the Stockholm/Rotterdam Conventions and their uses - Annex A

Dicofol is an organochlorine miticidal pesticide that has been used in agriculture to control mites on a variety of field crops, fruits, vegetables, ornamentals, cotton, tea.

Dieldrin was used principally to control termites and textile pests. Dieldrin has also been used to control insect-borne diseases and insects living in agricultural soils. Its half-life in soil is approximately five years. The pesticide aldrin rapidly converts to dieldrin, so concentrations of dieldrin in the environment are higher than dieldrin use alone would indicate. Dieldrin is highly toxic to fish and other aquatic animals, particularly frogs, whose embryos can develop spinal deformities after exposure to low levels.

Endosulfan is used on a very wide range of crops, including soy, cotton, rice, and tea. Other crops include vegetables, fruits, nuts, berries, grapes, cereals, pulses, corn, oilseeds, potatoes, coffee, mushrooms, olives, hops, sorghum, tobacco, and cacao. It is used on ornamentals and forest trees and has been used in the past as an industrial and domestic wood preservative, and for controlling earthworms in turf. Endosulfan is listed in Annex A to the Stockholm Convention with specific exemptions for production and use on crop-pest complexes listed in part VI of that annex (decision SC-5/3).

Endrin is sprayed on the leaves of crops such as cotton and grains. It is also used to control rodents such as mice and voles. Animals can metabolize endrin, so it does not accumulate in their fatty tissue to the extent that structurally similar chemicals do. It has a long half-life, however, persisting in the soil for up to 12 years. In addition, endrin is highly toxic to fish.

Heptachlor was used to kill soil insects and termites and has also been used more widely to kill cotton insects, grasshoppers, other crop pests, and malaria-carrying mosquitoes. It is believed to be responsible for the decline of several wild bird population. Laboratory tests have also shown high doses of heptachlor to be fatal to mink, rats, and rabbits. Heptachlor is classified as a possible human carcinogen. Food is the major source of exposure for humans, and residues have been detected in the blood of cattle from the US and from Australia.

Chemicals controlled under the Stockholm/Rotterdam Conventions and their uses - Annex A

Hexabromobiphenyl was used as a fire retardant in three main commercial products: acrylonitrilebutadiene-styrene (ABS) thermoplastics for constructing business machine housings and in industrial (e.g. motor housing), and electrical (e. g. radio and TV parts) products; as a fire retardant in coatings and lacquers; and in polyurethane foam for auto upholstery.
It is listed in Annex A to the Stockholm Convention without specific exemptions (decision SC-4/13).

Hexabromocyclododecane HBCDD is used as a flame retardant additive, during the service life of vehicles, buildings or articles. The main uses of HBCDD are in flame-retarded expanded (EPS) and extruded (XPS) polystyrene foam for insulation and construction, with other uses in textile applications and electric and electronic appliances (high impact polystyrene/HIPS). In textiles, HBCDD is used in backcoatings for upholstery and other interior textiles, including automotive applications. HBCDD is listed in Annex A to the Stockholm Convention with specific exemptions for production and use in EPS and XPS in buildings (decision SC-6/13).

Polybromodiphenyl ethers including tetra-, penta-, hexa-, and heptaBDEs inhibit or suppress combustion in organic materials and therefore, are used as additive flame retardants. The production of tetra - and pentaBDEs has ceased in certain regions of the world, while no production of hexa- and heptaBDEs is reported.

Commercial pentabromodiphenyl ether (c-pentaBDE) is a mixture of brominated flame retardants (BFRs), mainly isomers of pentabromodiphenyl ether and tetrabromodiphenyl ether. Brominated flame retardants are a group of brominated organic substances that inhibit or suppress combustion in organic material. C-pentaBDE is or has been used almost exclusively in the manufacture of flexible polyurethane (PUR) foam for furniture and upholstery in homes and vehicles, packaging, and non-foamed PUR in casings and electronic equipment (EE). They are also used to some extent in specialized applications in textiles and in industry.
Pentabromodiphenyl ether and tetrabromodiphenyl ether are listed in Annex A to the Stockholm Convention with specific exemptions for recycling of articles that contain or may contain those substances. This specific exemption will expire at the latest in 2030 (decision SC-4/18).

Chemicals controlled under the Stockholm/Rotterdam Conventions and their uses - Annex A

Commercial octabromodiphenyl ether c-octaBDE has been used as an additive flame retardant in the plastics industry. Globally 70% of c-octaBDE has been used in acrylonitrilebutadiene styrene (ABS). Other minor uses include high impact polystyrene (HIPS), polybutylene terephthalate (PBT) and polyamide polymers. **c-octaBDE is** listed in Annex A with specific exemptions for recycling of articles that contain or may contain those substances. This specific exemption will expire at the latest in 2030 (decision SC-4/14).

Decabromodiphenyl ether (DecaBDE) has been mainly used as an additive flame retardant combining with the material where it is used to inhibit the ignition and slow the rate where flames spread. It has a wide range of applications including in plastics, polymers, composites, textiles, adhesives, sealants, coatings and inks. DecaBDE containing plastics are used in housings of computers and TVs, wires and cables, pipes and carpets. Moreover, it is also used in commercial textiles, mainly for public buildings and transport, and in textiles for domestic furniture.

Hexachlorobenzene (HCB) was first introduced in 1945 to treat seeds, HCB kills fungi that affect food crops. It was widely used to control wheat bunt. It is also a byproduct of the manufacture of certain industrial chemicals and exists as an impurity in several pesticide formulations.

Chemicals controlled under the Stockholm/Rotterdam Conventions and their uses - Annex A

Hexachlorobutadiene (HCBD) is unintentionally formed and released from the production of certain chlorinated hydrocarbons, magnesium, polyvinyl chloride, ethylene dichloride and vinyl chloride monomer and incineration of acetylene, chlorine residues caused by poor abatement control. Previously, it was intentionally produced or used in the production of lubricants, as a solvent, a heat transfer liquid and hydraulic liquid, yet HCBD is not known to be currently intentionally produced or used. HCBD is listed in Annex A (elimination) without specific exemptions (decision SC-7/12) and in Annex C (Unintentional production) to the Stockholm Convention (decision SC-8/12). Parties must take measures to eliminate the production and use of HCBD and also take measures to reduce the unintentional releases of HCBD.

Lindane is listed in Annex A to the Stockholm Convention with specific exemptions for the use of lindane as a human health pharmaceutical for the control of head lice and scabies as second line treatment (decision SC-4/15). Alpha- and beta-HCH are listed in Annex A to the Stockholm Convention without specific exemptions (decisions SC-4/10, SC-4/11). It has been used as a broad-spectrum insecticide for seed and soil treatment, foliar applications, tree and wood treatment and against ectoparasites in both veterinary and human applications. The production of lindane has decreased rapidly in the last few years and only few countries are still known to produce lindane. Use of alpha- and beta-HCH as insecticides was phased out years ago, but these chemicals have been produced as byproducts of lindane.

Long-chain perfluorocarboxylic acids PFCAs, their salts and related compounds are used, or may have been used, in a range of applications, including in: industrial applications (e.g., as surfactants, and in the production of fluoropolymers); electronics; medical devices; printing inks and photographic materials; automotive care products; building and construction materials; cookware and food-contact materials; fire-fighting foams; ski waxes; and various consumers products (such as household products, personal care products, home textiles and apparel). In addition, long-chain PFCAs and their related compounds may be unintentionally produced during the manufacturing of per- and polyfluoroalkyl substances (PFASs).

Chemicals controlled under the Stockholm/Rotterdam Conventions and their uses - Annex A

Mirex is used mainly to combat fire ants, and it has been used against other types of ants and termites. It has also been used as a fire retardant in plastics, rubber, and electrical goods.

Pentachlorobenzene was used in PCB products, in dyestuff carriers, as a fungicide, a flame retardant and as a chemical intermediate e.g. previously for the production of quintozene. PeCB might still be used as an intermediate. PeCB is also produced unintentionally during combustion, thermal and industrial processes. It also present as impurities in products such as solvents or pesticides. PeCB is listed in Annex A (elimination) without specific exemptions and in Annex C (Unintentional production) to the Stockholm Convention (decision SC-4/16).

Pentachlorophenol and its salts and esters has been used as herbicide, insecticide, fungicide, algaecide, disinfectant and as an ingredient in antifouling paint. Some applications were in agricultural seeds, leather, wood preservation, cooling tower water, rope and paper mill system. Chlorinated contaminants including hexachlorobenzene, pentachlorobenzene, and dioxins and furans are produced during the manufacturing process. In addition, dioxins and furans formed during the manufacturing process can be released during the use and disposal of PCP-treated wood. Its use has been significantly declined due to the high toxicity of PCP and its slow biodegradation. Pentachlorophenol and its salts and esters are listed in Annex A to the Stockholm Convention with specific exemptions for production and use of pentachlorophenol for utility poles and cross-arms (decision SC-7/13).

Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds have unique properties with a high resistance to friction, heat, chemical agents, low surface energy and used as water, grease, oil and soil repellent. It is widely utilized in a variety of consumer goods such as carpets, leather, apparel, textiles, firefighting foam, papermaking, printing inks, sealants, non-stick cookware. PFHxS, its salts and PFHxS related compounds are listed in Annex A to the Stockholm Convention without any specific exemptions (decision SC-10/13).

Chemicals controlled under the Stockholm/Rotterdam Conventions and their uses – Annex A

Polychlorinated biphenyls (PCB) possess properties including longevity, heat absorbance and form an oily liquid at room temperature that is useful for electrical utilities and in other industrial applications. Due to their physico-chemical properties, PCB were manufactured worldwide for use in a wide range of applications, most importantly as insulating were and heat exchange fluids in transformers and capacitors and other electric equipment, and in open applications such as additives in paint, carbonless copy paper, and plastics. PCB are toxic and can cause serious health effects in humans and animals, including reproductive impairment and immune system dysfunctions. PCB are listed in Annex A and C to the Stockholm Convention.

Polychlorinated naphthalenes have been used in many applications including: use as wood preservative, as additive to paints and engine oils, and for cable insulation and in capacitors. PCNs are unintentionally generated during high-temperature industrial processes in the presence of chlorine. Of the known releases, combustion (primarily waste incineration) is considered the most significant current source. PCNs are also unintentionally generated with similar mechanisms as polychlorinated dibenzo-p-dioxins and dibenzofurans (PCDD/PCDF) during other industrial processes such as smelting in the secondary non-ferrous metal industry, cement and magnesia production, aluminium refining and coking. PCN is listed in Annex A (elimination) with specific exemptions for production of those chemicals as intermediates in production of polyfluorinated naphthalenes, including octafluoronaphthalene, and the use of those chemicals for the production of polyfluorinated naphthalenes, including octafluoronaphthalene; and in Annex C (Unintentional production) to the Stockholm Convention (decision SC-7/14).

Perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds are used widely in the production of fluoroelastomers and fluoropolymers, for the production of non–stick kitchen ware, food processing equipment. PFOA-related compounds, including side-chain fluorinated polymers, are used as surfactants and surface treatment agents in textiles, paper and paints, firefighting foams. PFOA has been detected in industrial waste, stain resistant carpets, carpet cleaning liquids, house dust, microwave popcorn bags, water, food, and Teflon. Unintentional formation of PFOA is created from inadequate incineration of fluoropolymers from municipal solid waste incineration with inappropriate incineration or open burning facilities at moderate temperatures.

Chemicals controlled under the Stockholm/Rotterdam Conventions and their uses – Annex A

Short-chain chlorinated paraffins have been used as softeners in plastics, paints, coatings and sealants, as flame retardants in rubber, plastics and textiles as well as an extreme pressure lubricant in metal working fluids.

Methoxychlor is an organochlorine pesticide originally developed as a replacement for DDT. Methoxychlor has been used as an insecticide combating a wide range of pests including biting flies, houseflies, mosquito larvae, cockroaches, and chiggers. It has commonly been used in both agricultural and veterinary practices, for example for treating field crops, vegetables, fruits, stored grains, livestock, pets, homes, gardens, lakes, and marshes.

Toxaphene is used on cotton, cereal grains, fruits, nuts, and vegetables. It has also been used to control ticks and mites in livestock. Toxaphene was the most widely used pesticide in the US in 1975. Up to 50% of a toxaphene release can persist in the soil for up to 12 years. For humans, the most likely source of toxaphene exposure is food. While the toxicity to humans of direct exposure is not high, toxaphene has been listed as a possible human carcinogen due to its effects on laboratory animals. It is highly toxic to fish.

UV-328 is a phenolic benzotriazole that is used as a UV absorber to protect surfaces against discoloration and degradation under UV/sunlight. UV-328 has wide range of applications, but its main uses are in paints and coatings, and as an additive in a wide variety of plastics, including in the non-food contact layer of food packaging. In the automobile sector, UV-328 is used in paints, coatings and sealants, as well as in liquid crystal panels and meters mounted on vehicles, and resin for interior and exterior parts of vehicles. In food packaging, it is used as an additive in plastics, printing ink and adhesives.

Chemicals controlled under the Stockholm/Rotterdam Conventions and their uses - Annex B

DDT has been used since 1940 as an insecticide to control insect vectors for diseases such as malaria. Its use has been restricted since the 1970's because it persists in the environment, is toxic to a number of organisms including fish and biomagnifies in the food chain causing significant reproductive effects in birds. Health concerns arose due to bioaccumulation in humans and its potential to cause tumors. Its production is restricted for use in disease vector control programs under the Stockholm Convention.

Perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF) has been used for a variety of products due to its surface-active properties, surface resistance/repellency to oil, water, grease or soil. PFOS is both intentionally produced and formed by degradation from a large group of related substances, referred to as PFOS-related substances. Intentional uses of PFOS can be found in electric and electronic parts, fire fighting foam, photo imaging, hydraulic fluids, leather, paper and textiles.

Chemicals controlled under the Stockholm/Rotterdam Conventions and their uses - Annex C

Polychlorinated dibenzo-p-dioxins (PCDD) are produced unintentionally due to incomplete combustion, as well during the manufacture of pesticides and other chlorinated substances. They are emitted mostly from the burning of hospital waste, municipal waste, and hazardous waste, and also from automobile emissions, peat, coal, and wood. There are 75 different dioxins, of which seven are considered to be of concern. Dioxins have been associated with a number of adverse effects in humans, including immune and enzyme disorders and chloracne, and they are classified as possible human carcinogens.

Polychlorinated dibenzofurans (PCDF) are produced unintentionally from many of the same processes that produce dioxins, and also during the production of PCBs. They have been detected in emissions from waste incinerators and automobiles. Furans are structurally similar to dioxins and share many of their toxic effects. There are 135 different types, and their toxicity varies. Furans persist in the environment for long periods and are classified as possible human carcinogens. Food, particularly animal products, is the major source of exposure for humans. Furans have also been detected in breast-fed infants.

Summary of products that may contain controlled substances

- **Meat and fish (due to contamination)** Ch 2 & Ch 3
- **Vegetables/crops treated with pesticides** S II
- **Wood treated with pesticides** Ch 44
- **Products that may contain flame retardants:**
  - **Textiles** S XI
  - **Lether** S VIII
  - **Paper** S X
  - **Carpets** Ch 57
  - **Plastics** Ch 39
  - ✓ ABS 3903.30
  - ✓ PS expanded or foams HIPS 3903.11/19
  - ✓ PU (foams) 3909.50
  - ✓ Polyamides 39.08
  - ✓ PVC 3904.10/21/22
  - ✓ Fluoropolymers (Teflon-like products) 3904.6
- **Fire-fighting foams** 38.13
- **Adhesives, sealants, coatings** Ch 32/ 38.09
- **Paints** 32.08/32.09/32.10
- **Construction materials** 39.22/39.25/39.26/Ch 68
- **Lubricants** 27.10
- **Oils** 2710.20
- **Heat exchange or hydraulic fluids** 38.19/38.20
- **Surfactants** Ch 34
- **Surface-repellent products** 38.09
- **Transformers** 85.04
- **Capacitors** 85.32
- **Insulated cables** 85.44
- **Electric and electronic appliances (computer and TV housings)** Ch 84 & 85
- **Automotive parts (plastic parts, seats made with PU, etc.)** Ch 39/87.08
- **Upholstery in homes** Ch 57
- **Human health products (control of head lice, malaria) (DDT and Lindane)** 3004.60
- **Food packaging (due to additive in plastics)** 39.23
- **End-of-life vehicles** 72.04
- **Certain wastes (e-wastes, waste oils, municipal wastes, clinical wastes, etc.)** 2710.91/38.25/39.15/85.49

More limitations to HS codes

HS codes have certain limitations

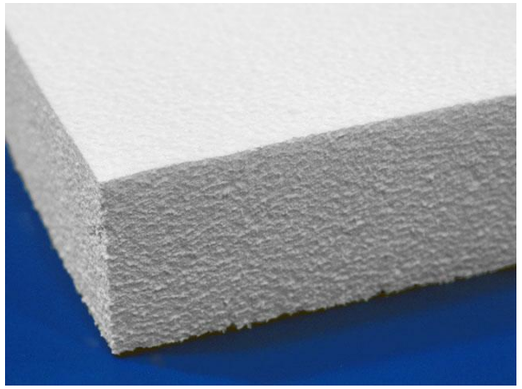
- They are useful for monitoring trade in chemical substances and preparations
- Certain products are classified based on their function and not on their composition
- Plastics are classified according to the monomer content and not to additive content
- Foams are classified based on the polymer not on the additives
- Electric and electronic products are classified according to their function
- There are a few specific HS codes for wastes containing PCBs, PCTs or PBBs

The additive content of a product is more a production problem than a trade problem.

Products should not be produced with certain controlled substances in the first place.

Other relevant HS codes

		- Waste oils :
2710.91		-- Containing polychlorinated biphenyls (PCBs), polychlorinated terphenyls (PCTs) or polybrominated biphenyls (PBBs)
2710.99		-- Other
39.03		**Polymers of styrene, in primary forms.**
		- Polystyrene :
	3903.11	-- Expansible
	3903.19	-- Other
	3903.20	- Styrene-acrylonitrile (SAN) copolymers
	3903.30	- Acrylonitrile-butadiene-styrene (ABS) copolymers
	3903.90	- Other
	3909.50	- Polyurethanes
38.13	3813.00	**Preparations and charges for fire-extinguishers; charged fire-extinguishing grenades.**



Wastes that may contain PCB, PCT or PBB

Wastes, substances or articles containing, consisting of or contaminated with PCB, PCT, PBB or PCN at a concentration level of 50 mg/kg or more

- **Transformers**
- **– Capacitators**
- **– Plasticizers**
- **– PVC coatings**
- **– Pesticide extenders**
- **– Cutting oil**
- **– Flame retardants**
- **– Lubricating oil**
- **– Hydraulic oil**
- **– Sealants**
- **– Adhesives**
- **– Wood floor finishes**
- **– Paints**
- **– Contaminated soil**

Colour: Mainly black/dark brown.
Physical chemical properties: Liquid oil. Viscous.
Basel Convention entry: A3180
HS Code Heading 38.25

38.25		**Residual products of the chemical or allied industries, not elsewhere specified or included; municipal waste; sewage sludge; other wastes specified in Note 6 to this Chapter.**
	3825.10	- Municipal waste
	3825.20	- Sewage sludge
	3825.30	- Clinical waste
		- Waste organic solvents :
	3825.41	-- Halogenated
	3825.49	-- Other
	3825.50	- Wastes of metal pickling liquors, hydraulic fluids, brake fluids and anti-freeze fluids
		- Other wastes from chemical or allied industries :
	3825.61	-- Mainly containing organic constituents
	3825.69	-- Other
	3825.90	- Other

Example of joint issues: POPs in e-waste

Electronic and electrical waste (e-waste) is a specific waste stream controlled by the Basel Convention that may contain POPs addressed by the Stockholm Convention. E-waste may be subject to controls under both Conventions.

Three groups of POPs are of concern in relation to electronic electrical equipment

- **Brominated flame-retardants**
- **Perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF)**
- **Polychlorinated biphenyls (PCBs)**

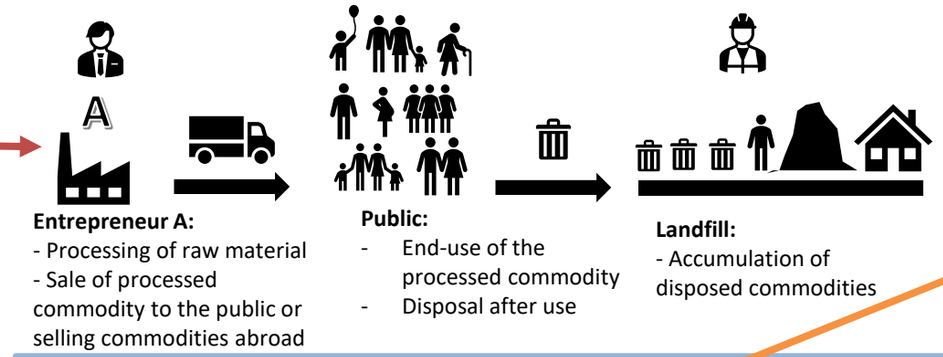
Transboundary movements not following the appropriate notification and consent procedures or resulting in deliberate dumping of wastes constitute illegal traffic, which is to be considered criminal under national legislation. Trade occurring in contravention of the obligations of the Rotterdam and Stockholm Conventions may also be considered illegal.

85.49	**Electrical and electronic waste and scrap.**
	- Of a kind used principally for the recovery of precious metal :
8549.21	-- Containing primary cells, primary batteries, electric accumulators, mercury-switches, glass from cathode-ray tubes or other activated glass, or electrical or electronic components containing cadmium, mercury, lead or polychlorinated biphenyls (PCBs)
8549.29	-- Other
	- Other electrical and electronic assemblies and printed circuit boards :
8549.31	-- Containing primary cells, primary batteries, electric accumulators, mercury-switches, glass from cathode-ray tubes or other activated glass, or electrical or electronic components containing cadmium, mercury, lead or polychlorinated biphenyls (PCBs)
8549.39	-- Other
	- Other :
8549.91	-- Containing primary cells, primary batteries, electric accumulators, mercury-switches, glass from cathode-ray tubes or other activated glass, or electrical or electronic components containing cadmium, mercury, lead or polychlorinated biphenyls (PCBs)
8549.99	-- Other

Article 3: Production and use
Elimination Annex A
Restriction Annex B
Several months

Article 6 of the Stockholm Convention requires, among other things, that Parties develop strategies to identify stockpiles, products and articles in use and wastes consisting of, containing or contaminated with chemicals listed in Annex A, B or C

Article 3: Production and use
Elimination Annex A
Restriction Annex B
Several months

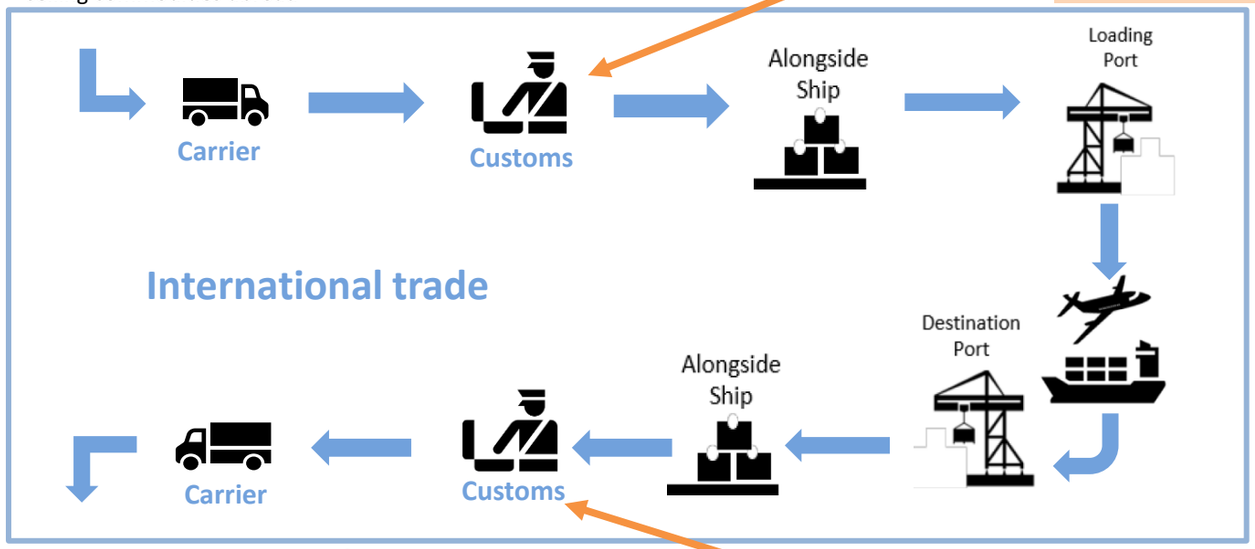


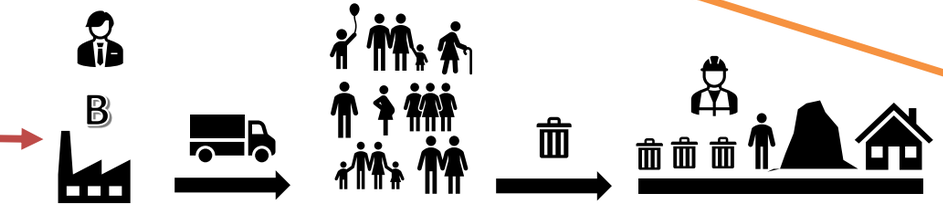
Entrepreneur A:
- Processing of raw material
- Sale of processed commodity to the public or selling commodities abroad

Public:
- End-use of the processed commodity
- Disposal after use

Landfill:
- Accumulation of disposed commodities

Article 3: Import and export
Elimination Annex A
Restriction Annex B
Hours/days





Entrepreneur B:
- Processing of raw material
- Sale of processed commodity to the public or buying commodities abroad

Public:
- End-use of the processed commodity
- Disposal after use

Landfill:
- Accumulation of disposed commodities

Article 3: Import and export
Elimination Annex A
Restriction Annex B
Hours/days

Customs procedures
Common issues for Customs

- Once the customs documents have been analyzed, you may want to confirm that a presumed illegal movement involves chemicals or wastes through physical inspection
- Within ports, dedicated inspection and storage facilities are usually at hand.
- When the inspection is done alongside a road or at a terrestrial border, please consider where it is safe – for you, others and the environment - to open and store the container.

Health and Safety precautions

- Before opening a container, you should be aware of the possible risks involved
- Try to identify the substance only with the information available

THINGS YOU SHOULD NOT DO

- ✓ DO NOT take any action unless you have been trained in handling toxic chemicals
- ✓ DO NOT enter confined spaces
- ✓ DO NOT open trailers or trucks
- ✓ DO NOT open drums or other containers
- ✓ DO NOT presume what is declared/on labels is what is inside
- ✓ DO NOT destroy evidence and secure the scene

Analysis of the chemicals

- To confirm the composition of the substance, it may be necessary to take samples for analysis
- You may need to call a specialist to take samples
- Ensure representative samples are taken
- A sampling plan should be prepared

- For Electrical and electronic goods, a functionality test may be necessary to determine whether the equipment is a second-hand good or a waste.
- The analysis of the sample will usually be performed by an accredited laboratory

Illegal trade

- The study of the trade documents and the physical inspection will lead to two conclusions:
  - ✓ The physical movement is legal
  - ✓ The physical movement is illegal*

* Because the Stockholm and Rotterdam Convention do not explicitly define illegal trade, domestic laws, including those implementing the Convention, define the legality of the production and trade in listed chemicals.

- The actions Customs can take if the trade is illegal will depend on the applicable laws and regulations in the Country

- Customs may not have the authority to take administrative, civil or criminal investigation measures
- Cargo should be detained and stored in safe and protected areas
- Gather of evidence
- Assigning responsibilities for the illegal traffic
- Disposal of wastes in an environmentally sound manner
- Guidance on the prosecution of illegal traffic of wastes has been developed: https://www.basel.int/TheConvention/Publications/GuidanceManuals/tabid/2364/Default.aspx

Smuggling Schemes

- Not possible to inspect all cargo
- Avoid disrupting legal trade

When targeting illegal movements of hazardous chemicals and wastes, police and other law enforcement officers need to be aware of the techniques used to conceal these illegal shipments

In general, illegal movements are disguised or hidden or not declared.

E.g.: Wastes declared as second-hand goods
Hazardous wastes declared as non-hazardous

Smuggling Schemes – Examples of misdeclarations

E-waste and waste refrigerators containing CFC declared as second-hand goods

Mixed household residues declared as paper or plastic waste

PCB-containing transformers classified as metal scrap

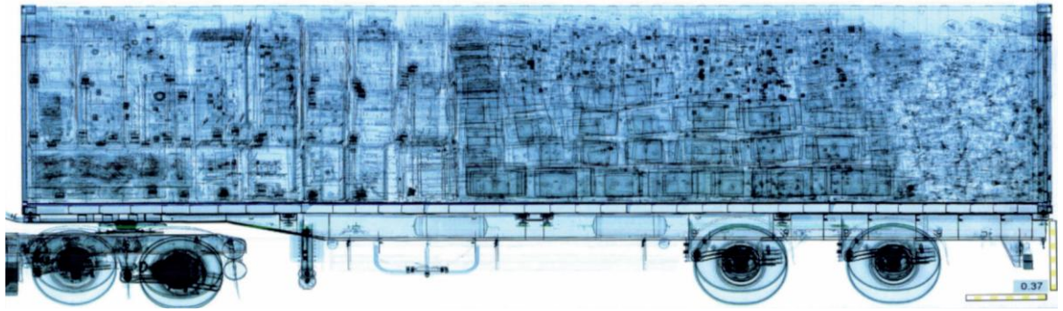
Hazardous chemicals declared as non-hazardous

Common concealment methods

In addition to concealing the true nature of a shipment, the goods that are illegally traded are often physically hidden.

Common concealment methods are:

- Using a cover load: placing the illegal goods behind rows of legal goods or under layers of legal goods
- Placing false labels on the chemicals or removing old labels
- Hiding e-waste in blinded and sealed vehicles or trucks
- Mixing hazardous waste with non-hazardous waste or material



Risk assessment and Analysis

Customs controls are based on targeting high-risk cargo through a risk assessment of the current situation. This assessment may provide, for instance, evaluation of the existence of illegal trade/traffic, and impact of illegal trade/traffic on human health, the environment and the economy.

Risk Identification

- **What** kind of illegal activity is taking place?
- **Where** are illegal activities taking place or most likely to take place within the country or on which route?
- **Why** do individuals or legal entities engage in illegal trade/traffic?
- **When** does illegal trade/traffic take place?

The WCO can help countries to implement risk assessments

Profiling and indicators

Risk indicators are developed following completion of the risk identification and analysis phases of the risk assessment. Risk indicators flag potential problems with a particular shipment.

Profiles can be built into their Customs electronic systems.

Some examples of risk indicators

- Declaring certain identified HS codes not triggering PIC procedures
- Broken, defective or non-existent seals
- Packaging not corresponding to the goods/wastes description
- Dented, damaged or mishandled containers or recently painted drums
- Placards or labels on the container or on the packaging (drums, boxes, etc.) indicating hazardous materials;
- Shippers-owned container (not owned by a shipping line leasing company, without a prefix or with a prefix not related to a shipping line and container number);
- Expressions like: ‘expired’, ‘discarded’, ‘do not return’ or ‘for disposal’;
- Leaking containers or packaging.

Example of High-Risk HS Codes

For the risk analysis, it is advisable to consider to pose highest risk the subheadings not subject to the PIC procedure or wastes declared for recycling, as importers may try to hide hazardous wastes in the not hazardous subheadings and avoid presenting the PIC documents

Subheadings covered by the PIC procedure
Y48 and A3210

Subheadings not covered by the PIC procedure
B3011

HS codes	Declared as	In fact can be
3915	Plastic scrap	Waste plastics mixed with other wastes, medical waste or used chemical bottles, municipal solid waste
7204	Metal scrap	Batteries, metal scrap contaminated with hazardous waste, electronic wastes
8528	CRT monitors	Waste CRT monitors

Heading 39.15.

Delete and substitute :

"**39.15 Waste, parings and scrap, of plastics.**

3915.40 - Goods specified in Subheading Note 2 to this Chapter

- Other, consisting of one non-halogenated polymer only, almost free from contamination and other types of waste :

3915.51 -- Of polymers of ethylene

3915.52 -- Of polymers of propylene

3915.53 -- Of polymers of styrene

3915.54 -- Acrylonitrile-butadiene-styrene (ABS) copolymers

3915.55 -- Poly(ethylene terephthalate)

3915.56 -- Polycarbonates

3915.57 -- Polyethers

3915.58 -- Urea-formaldehyde resins; phenol-formaldehyde resins; melamine-formaldehyde resins; epoxide resins; alkyd resins

3915.59 -- Other

- Other, containing halogenated polymers, including mixtures consisting of halogenated polymers and non- halogenated polymers :

3915.61 -- Consisting only of polymers of vinyl chloride

3915.62 -- Manufacturing waste, consisting of only one of the following fluorinated polymers, almost free from contamination and other types of waste: perfluoroethylene-propylene copolymer; tetrafluoroethylene-(perfluoroalkyl vinyl ether) copolymer; tetrafluoroethylene-(perfluoromethyl vinyl ether) copolymer; poly(vinyl fluoride); poly(vinylidene fluoride)

3915.69 -- Other

- Other :

3915.91 -- Mixtures consisting only of two or more of the following polymers, almost free from contamination and other types of waste : polyethylene; polypropylene; poly(ethylene terephthalate)

3915.99 -- Other".

Real case scenario – Hazardous chemicals

In 2001, the Dutch Environmental Authorities were informed by the Customs about two leaking containers in the port of Rotterdam. The investigation revealed that a US company was ordered by the US Environmental Protection Agency to clean up chemicals it had been storing illegally for years. Part of the chemicals were loaded onto 29 sea containers with more than 300 tons of expired chemicals declared as waste and were to be shipped via Rotterdam to Nigeria.

The Dutch authorities discovered that the buyer in Nigeria did not exist and assumed that the chemicals were meant for illegal dumping.

Investigation required close coordination among the American, Dutch and Nigerian agencies, including joint Environmental Protection Agency-Dutch sampling of the chemicals in Rotterdam.

After having been stored in the port terminal in Rotterdam during the investigations for about three years, the wastes were finally incinerated in the Netherlands. A US federal judge sentenced the defendants to pay more than $2 million in restitution and fines, with most of the funds being allocated to the Dutch authorities to cover the costs of storage and incineration of the hazardous wastes.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More risk indicators

- Inadequate, incomplete or inconsistent description of the good/waste being shipped
- Missing documents, such as a movement document
- Cash payment, freight paid in advance
- False certificates
- Returned merchandise
- Falsely declaring the use of goods as being granted exemption for analytical or laboratory use
- Activity not corresponding to that usually carried out by the company
- Operator not known or unlicensed for hazardous waste management
- The name of the consignee company is not indicated, with only the freight forwarder’s contact details being given
- Address of the consignee is a Post Office Box
- Address of the waste disposer is a building in a major city
- History of illegal activities
- Import, transit or export country in conflict or facing internal instability
- Import country lacking the capacity to manage hazardous wastes in an environmentally sound manner
- Non-party to one or more of the BRS conventions

Visual indication of risks

- If the seals are broken, the contents are suspect.
- Hazardous materials must be packaged in appropriate containers.

For example, if the manifest states that the material is corrosive, the container should be made of plastic.
If the material is a solvent, the container should be made of metal. Review the shipping documents to be sure the container is appropriate.

- Recently painted drums could be suspicious.

Look on the sides of the containers to determine whether paint covers one or more labels or other markings on the containers. If so, the shipment is suspicious.

- Raw materials are rarely packaged in reconditioned containers.
- Placards indicating hazardous materials
- Leaking containers
- Label ‘not be returned’
- Mixture of new with old drums

National Cooperation

- Preventing and combating illegal trade in hazardous chemicals and wastes requires the cooperation of several enforcement agencies at the national and international levels.

At National level

- ✓ Environmental agencies
- ✓ Public health
- ✓ Agricultural
- ✓ Trade (Customs)
- ✓ Safety
- ✓ Police/Enforcement
- ✓ Justice

Other Stakeholders

Private sector
Civil society organizations (NGOs), and
Academia

- Clarification of who is involved and their responsibilities

Support to Customs

- Customs officers need the technical know-how in relation to chemicals and wastes
- Customs officers need to know who to contact in case of doubts or findings
- An up-to-date contact list of relevant authorities should be available
- Parties should establish a clear procedure on what to do and who is responsible

- Relevant authorities can support Customs with:

✓ Training and capacity building
✓ Technical and legal information
✓ Information about licenses and consents
✓ Identification and classification issues
✓ Sampling and testing
✓ Contacting authorities in other countries
✓ Historical data from previous inspection or
✓ Enforcement actions
✓ Establishing risk profiles

Customs can support National Authorities

Customs officers have access to relevant data concerning import, export and transit of goods. Customs' mandate and legal powers may extend to the following kind of information and activities:

- Pre-arrival and pre-departure information
- Historical shipping data
- Alert system through profiles in the Customs systems
- Power to detain, open, break seals and inspect containers
- Access to off-loading facilities and equipment and storage areas
- X-ray scanner
- Access to ships, trains or trucks
- Provide statistical information on imports and exports
- Access to the Customs Enforcement Network of the WCO

How to organize inter-agency cooperation?

There are various ways of setting up inter-agency collaboration:

- on an informal basis or
- on a formal basis.

Examples of formal cooperation are:

- the signing of an agreement between relevant agencies (e.g. a Memorandum of Understanding);
- the establishment of communication channels between relevant authorities; and
- the adoption of joint-guidelines and procedures for action clarifying competencies of each agency.

International Cooperation

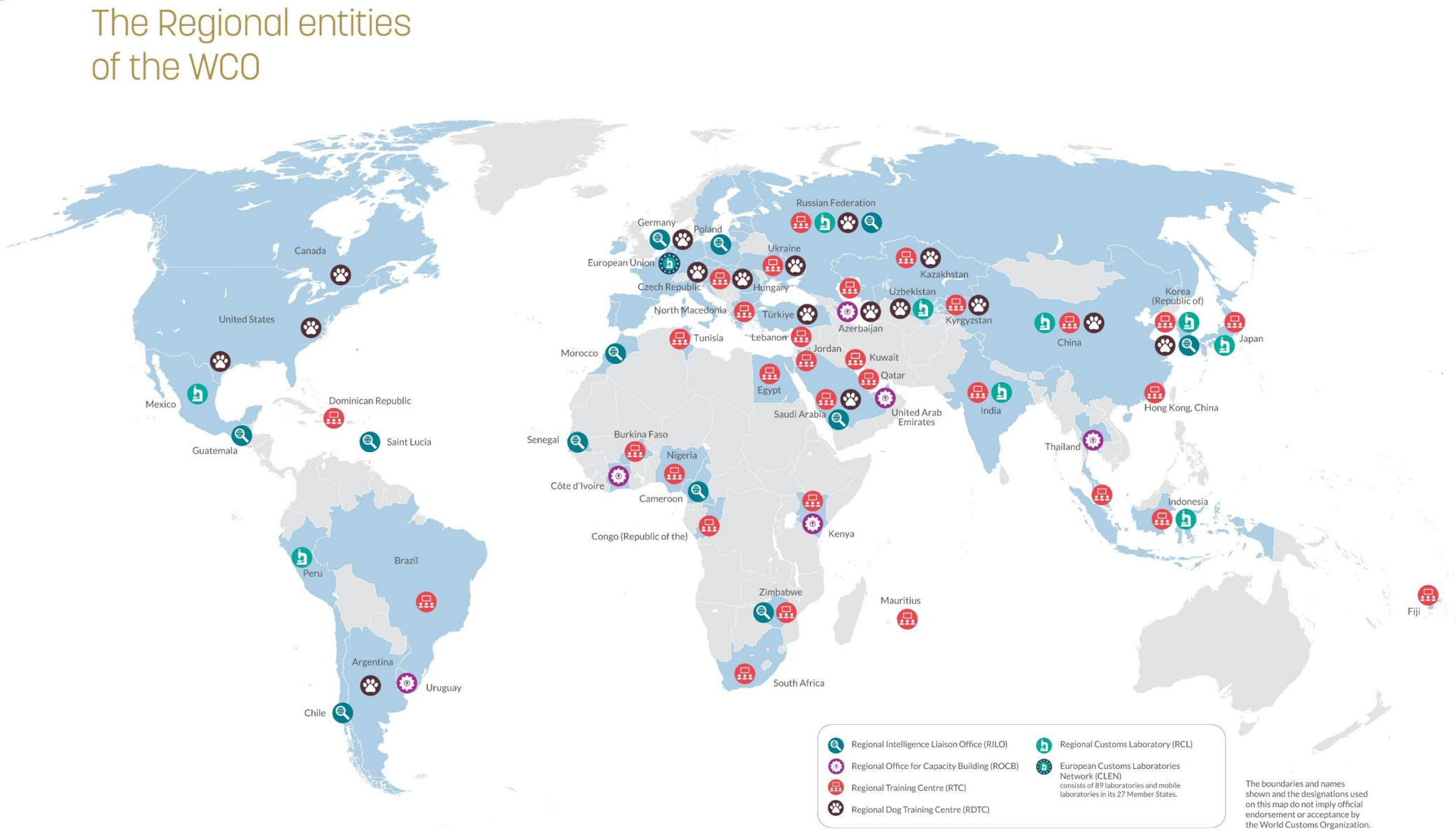
Due to the international nature of transboundary movements of hazardous chemicals and wastes, collaboration at the international level is necessary.

The exchange of information between Competent Authorities (Basel), Designated National Authorities (Rotterdam) and National Focal Points (Stockholm) and their Regional Centres is crucial to ensure that Parties are equipped with the necessary information to allow them to take informed decisions on the transboundary movement and subsequent management of hazardous chemicals and wastes.

Some important International Organizations and Networks are:

- ✓ Interpol
- ✓ United Nations Office on Drugs and Crime (UNODC)
- ✓ Green Customs Initiative
- ✓ Regional Networks such as INECE, IMPEL, etc. are Enforcement networks aimed to contribute to more effective compliance and enforcement of environmental laws.
- ✓ World Customs Organization (WCO)

Regional Entities of the WCO



Operation Demeter X

Operation DEMETER dates back to 2009 to enforce the provisions of the Basel Convention, and, since 2019, to implement the provisions of the Montreal Protocol. Some seizures also include hazardous chemicals

The tenth iteration of WCO Operation DEMETER, targeted illicit wastes, ozone depleting substances (ODS) and potent greenhouse gases, took place over eight weeks in the second semester of 2024. It saw the participation of a record 110 Customs administrations and led to 450 seizures reported by 47 Customs administrations.

These seizures included 324 seizures of waste, 99 seizures of ODS, HFCs and equipment containing controlled substances under the Montreal Protocol, and 27 seizures of other commodities, including restricted or prohibited commodities such as hazardous chemicals.

E-waste, plastic waste, metal waste, and end-of-life vehicles were the most traded categories of illegal waste in terms of the number of seizures. In terms of quantity in kg, plastic waste was the first category, constituting 24.71% of the overall quantity seized.

Thank you for your attention

Developed under Component 4 of the Global NIP Update Project (GEF ID 10785), executed by GGKP, funded by GEF and led by UNEP