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

This heading covers a range of products (**other than** those having the character of medicaments, including veterinary medicaments - **heading 30.03** or **30.04**) intended to destroy pathogenic germs, insects (mosquitoes, moths, Colorado beetles, cockroaches, etc.), mosses and moulds, weeds, rodents, wild birds, etc. Products intended to repel pests or used for disinfecting seeds are also classified here.

These insecticides, disinfectants, herbicides, fungicides, etc., are applied by spraying, dusting, sprinkling, coating, impregnating, etc., or may necessitate combustion. They achieve their results by nerve-poisoning, by stomach-poisoning, by asphyxiation or by odour, etc.

The heading further covers anti-sprouting products and plant-growth regulators intended to inhibit or promote physiological processes in plants. Their modes of application vary and their effects range from destruction of the plant to enhanced growth-vigour and improved crop-yield.

These products are classified here in the following cases only :

(1) When they are put up in packings (such as metal containers or paperboard cartons) for retail sale as disinfectants, insecticides, etc., or in such forms (e.g., in balls, strings of balls, tablets or plates) that there can be no doubt that they will normally be sold by retail.

Products put up in these ways may or may not be mixtures. The unmixed products are mainly chemically defined products which would otherwise fall in Chapter 29, e.g., naphthalene, or 1,4-dichlorobenzene.

The heading also includes the following products, **provided** they are put up for retail sale as disinfectants, fungicides, etc. :

(a) **Organic surface-active products and preparations**, with active cation (e.g., quaternary ammonium salts), having antiseptic, disinfectant, bactericidal or germicidal properties.

(b) **Poly(vinyl pyrrolidone)-iodine**, being a reaction product of iodine and poly(vinyl pyrrolidone).

(2) When they have the character of preparations, whatever the presentation (e.g., as liquids, washes or powders). These preparations consist of suspensions or dispersions of the active product in water or in other liquids (e.g., a dispersion of DDT (ISO) (clofenotane (INN), (1,1,1-trichloro-2,2-bis(*p*-chlorophenyl)ethane) in water), or of other mixtures. Solutions of active products in solvents **other than water** are also included here (e.g., solutions of pyrethrum extract (other than standardised pyrethrum extract), or copper naphthenate in a mineral oil).

Intermediate preparations, requiring further compounding to produce the ready-for-use insecticides, fungicides, disinfectants, etc., are also classified here, **provided** they already possess insecticidal, fungicidal, etc., properties.

Insecticidal, disinfecting, etc., preparations may have a basis of copper compounds (copper acetate, sulphate, acetoarsenite, etc.), of sulphur or sulphur compounds (calcium sulphide, carbon disulphide, etc.), of mineral creosote or anthracene oils, of DDT (ISO) (clofenotane (INN), (1,1,1-trichloro-2,2-bis(*p*-chlorophenyl)ethane), lindane (ISO, INN), parathion, of phenol or cresol derivatives, of arsenical products (calcium arsenate, lead arsenate, etc.), of materials of vegetable origin (nicotine, tobacco essences and powders, rotenone, pyrethrum, red squill, rape oil), of plant-growth regulators, natural or synthetic (e.g., 2,4-D), of cultures of micro-organisms, etc.

Poisoned bait composed of edible products (wheat grains, bran, molasses, etc.) mixed with poison is another example of the preparations included in this heading.

(3) When they are put up in the form of **articles** such as sulphur-treated bands, wicks and candles (for disinfecting and fumigating vats, living quarters, etc.), fly-papers (including those coated with glue not containing poisonous matter), grease bands for fruit trees (including those not containing poisonous matter), papers impregnated with salicylic acid for preserving jams, papers or small wooden sticks coated with lindane (ISO, INN) and acting by combustion, etc.

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The products of heading 38.08 can be divided into the following groups :

(I) **Insecticides**

Insecticides include not only products for killing insects, but also those having a repellent or attractant effect. The products may be in a variety of forms such as sprays or blocks (against moths), oils or sticks (against mosquitoes), powder (against ants), strips (against flies), cyanogen gas absorbed in diatomite or paperboard (against fleas and lice).

Many insecticides are characterised by their mode of action or method of use. Among these are :

- insect growth regulators : chemicals which interfere with biochemical and physiological processes in insects.

- fumigants : chemicals which are distributed in the air as gases.

- chemosterilants : chemicals used to sterilise segments of an insect population.
- repellents : substances which prevent insect attack by making their food or living conditions unattractive or offensive.
- attractants : used to attract insects to traps or poisoned baits.

(II) **Fungicides**

Fungicides are products which protect against the growth of fungi (e.g., preparations based on copper compounds) or which are designed to eradicate the fungi already present (e.g., preparations based on formaldehyde).

Fungicides can be characterised by their mode of action or method of use. Examples of this are :

Systemic fungicides	-	these chemicals are translocated in the sap stream from the site of application to other plant parts.
Fumigants	-	chemicals which counteract fungi when they are applied to affected materials in a gaseous form.

(III) **Herbicides, anti-sprouting products, plant-growth regulators**

Herbicides are chemicals which are used to control or destroy unwanted plants. Some herbicides are applied to dormant plant parts or seeds, while other herbicides are applied to the whole foliage. They can provide control which is **selective** (herbicides which affect specific plants) or **non-selective** (herbicides which result in the complete eradication of vegetation).

The group also includes defoliants, which are chemicals intended to cause the leaves or foliage of plants to drop prematurely.

Anti-sprouting products can be applied to seeds, bulbs, tubers or soils to inhibit or delay germination or sprouting.

Plant-growth regulators are applied to alter the life processes of a plant so as to accelerate or retard growth, enhance yield, improve quality or facilitate harvesting, etc. Plant hormones (phytohormones) are one type of plant-growth regulator (e.g., gibberellic acid). Synthetic organic chemicals are also used as plant-growth regulators.

(IV) **Disinfectants**

Disinfectants are agents which destroy or irreversibly inactivate undesirable bacteria, viruses or other micro-organisms, generally on inanimate objects.

Disinfectants are used, for example, in hospitals for cleaning walls, etc., or sterilising instruments. They are also used in agriculture for disinfecting seeds and in the manufacture of animal feeds to control undesirable micro-organisms.

The group includes sanitisers, bacteriostats and sterilisers.

The heading also includes products to control mites and ticks (acaricides), molluscs (molluscicides), nematodes (nematocides), rodents (rodenticides), birds (avicides), and other pests (e.g., lampreycides, predacides).

This heading **excludes** :

(a) Products for disinfecting, insecticidal etc., uses, not answering to the description above. These products are classified according to their nature under the appropriate headings, for example :

(i) Ground pyrethrum flowers (**heading 12.11**).

(ii) Pyrethrum extract (whether or not standardised by the addition of mineral oil) (**heading 13.02**).

(iii) Creosote oil or mineral creosote (**heading 27.07**).

(iv) Naphthalene, DDT (ISO) (clofenotane (INN), (1,1,1-trichloro-2,2-bis-(*p*-chlorophenyl)ethane) and other separate chemically defined compounds (including aqueous solutions) (**Chapter 28** or **29**).

(v) Cultures of micro-organisms used as a basis for rodenticides, etc. (**heading 30.02**).

(vi) Spent oxide (**heading 38.25**).

(b) Preparations covered by more specific headings of the Nomenclature, or having subsidiary disinfecting, insecticidal, etc., properties, for example :

(i) Anti-fouling paints for ships' hulls, containing toxic materials (**heading 32.08, 32.09** or **32.10**).

(ii) Disinfectant soaps (**heading 34.01**).

(iii) DDT (ISO) (clofenotane (INN), (1,1,1-trichloro-2,2-bis(*p*-chlorophenyl)ethane) wax polishes (**heading 34.05**).

(c) Disinfectants, insecticides, etc., having the essential character of medicaments, including veterinary medicaments (**heading 30.03 or 30.04**).

(d) Prepared room deodorisers, whether or not having disinfectant properties (**heading 33.07**).

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Subheading Explanatory Note.

Subheadings 3808.91 to 3808.99

Products which have multiple uses, and are therefore *prima facie* classifiable in more than one subheading, are usually classified by application of General Interpretative Rule 3.