

Substance name: Hexaflumuron

EC Number: 401-400-1

CAS Number: 86479-06-3

Evaluating competent authority: Portugal

HEXAFLUMURON Bait against termites

Termites are a common pest in southern Europe, particularly subterranean termites (*Reticulitermes* spp.), which cause significant damages to buildings, neighborhoods and even whole villages. The main food of these termites is cellulose in the form of wood, paper, textiles, etc. but during their search for food, they may also degrade many other materials which they do not consume. That is why termites represent one of the most dangerous problems that building wooden structures can suffer: they are difficult to detect; its ability to act is very fast; they can cross any material, including concrete; damages can remain hidden and when detected, generally, are irreparable.

Spain is severely infested by subterranean termites, widespread throughout the geography, due to weather conditions: warm temperature combined with the right amount of humidity. Depending on the species, each colony may contain from several thousand to several million individuals spread out over a surface area up to 1 ha.

Buildings at old quarters of cities are the most affected. Important cities in the Spanish historical heritage are usually target of termites. An example might be the historic quarter of Cordoba, with its monuments, being especially sensitive the Jewish Quarter, where there is a need to detect the pest early because the termites produce cracks in the walls of the houses, in the frames of the doors, even affect the structure of the buildings and can pass from one shelter to another in less than 24 hours.

To control this damaging pest there are two possible ways: liquid chemical treatments and bait systems (like the hexaflumuron based one). Liquid termiticides need significantly more active ingredient per site than bait systems and are declining in Europe.

My opinion as qualified Pest Control professional that using injection of chemical to control termites in a large urban area can entail toxicity problems, environmental risks such as contamination of subterranean water and diverting product to non controlled areas. In addition, physical barrier must be continuous in order to be efficient, and earth movements can break the required homogeneity.

Regarding bait treatments, available active ingredients in Europe for use in termite baits are very limited: only 3 and all undergoing review under directive 98/8/EC. Two of them have an Annex I inclusion recommendation whilst the third one has a non Inclusion recommendation. It is, therefore, important to keep alternative active ingredients in termite baits available that are effective on all termite species.

Dow Agrosciences' hexaflumuron formulation (SENTRITECH Termite Colony Elimination System) used in baits:

1) is able to control all the subterranean termite species present in Europe with very low concentration of the active substance: the formulation consists of hexaflumuron coated cellulose placed inside plastic tubes or cages at a concentration of 0.5 w/w for each bait. The total amount used per site in Spain is between 3 y 10 g a.i. with an average of 7 grams. The total volume of hexaflumuron yearly used in Europe (including La Reunion and Guadeloupe) is very small (< 20 kg / year).

If we compare these figures to alternative liquid chemical treatments, the amount of active ingredient that is recommended to be applied by the manufacturer of the liquid chemical barrier authorized in Spain using Fipronil is approximately 4 to 5 times more than hexaflumuron baits. That is to say, a treatment to control termites in a 150m² house using chemical liquid treatment would inject 22.7 ml of Fipronil into the soil, while using hexaflumuron baits would mean using 4-6 gr. of hexaflumuron, that is not injected but kept into the cellulose bait.

2) Furthermore, the exposure to humans, animals, environment is practically negligible:

- treatments are only made by professional pest control operators (PCO);
- the site owner signs a contract with the PCO and all steps, from installation to de-installation after colony elimination, are documented.
- hexaflumuron coated cellulose is only placed on in-ground stations when termites are present (firstly only untreated wood monitor are placed) and installation of above ground stations (with hexaflumuron) are only placed on known termite pathways.
- at the end of the efficacy period the traps and remaining product are collected by the pest control operator and disposed of appropriately. Once successful termite elimination has been achieved at a site, as a general rule the site does not need to be re-treated. hexaflumuron releases are considered to be minimal during use and due to the specific properties of hexaflumuron (low water solubility and high sorption to soil), it is not likely to contaminate surface or groundwater.
- As said, the active substance is used in very few quantities, and it's used in the bait that prevents it to be reached by children or domestic animals. Having into account that human toxicity is low, a person of 60 Kg should need to consume 60 kg of hexaflumuron coated cellulose to reach the DL50 (30 grams a.i. in one dose) which is highly improbable.

In summary, this treatment is particularly efficient eliminating whole colonies, and at the same time it's safe for humans and environment. We consider it must be positively taken into consideration by the members of the Commission, as a positive advice for its evaluation.

Hexaflumuron absence in the market could determine a drastic decrease in termite control, from either a quantitative or a qualitative point of view. The problems caused

by this pest are not only linked to the amount of affected buildings but also the relevance of some of them.

We have used liquid chemical systems, and different bait systems. We are currently using SentiTech system because we think that it is the most efficient. We have successfully installed it in more 100 sites and we have not experienced or observed either environmental toxicity problems or toxicity problems in mammals or humans.

We are strongly convinced that Spanish historical heritage and villages need this tool an effective mean for preventing attack of termites and so we request to retain EU authorization of hexaflumuron to ensure the product is available to limit the termite's irreparable damage.

We hope that you will take our concerns into consideration and ensure that this safe product can be approved.

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Yours sincerely,
Iñaki Rubio Carrera
Grupo Rubio Servicios Higiénicos Integrales. S.L

