

**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.

Every year historical monuments appeared in the media due to termites' infestation, such as Cathedral of Santiago, Cathedral of Tortosa (Tarragona), the old quarter of Tudela, Palace of Alhambra (Granada), monasteries, etc. The costs of National Heritage monuments restoration affected by termites cause millions of Euros annual losses. Cultural Heritage Spanish Institute pays particular attention to the infestations caused by these xylophages, evaluating the presence and the alterations produced by termites in different geographical areas, and including measures as treatments with baits installation to eradicate termites in urban areas.

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. 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 Agrosiences' 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 150m<sup>2</sup> 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, and therefore does not get into the soil.

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 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.

Yours sincerely

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Técnico



#### LARGE URBAN AREAS TREATED WITH SENTRITECH:

- *Pueblo de Palenciana (Córdoba)*
- *Barrio de Irala (Bilbao)*
- *Pueblo de Illora (Córdoba)*
- *Pueblo de Espejo (Córdoba)*
- *Pueblo de la Victoria (Córdoba)*
- *Villas Turísticas Priego (Córdoba)*
- *El barrio de la ciudad cooperativa de Sant Boi.*
- *El Barrio Arzobispo Armanyà de Vilanova i La Geltrú.*
- *Ayuntamiento de Orio Colonia “A” y “B”*
- *Ayto de Cabanillas Casco urbano*
- *Barrio de Iralla II Bilbao*
- *Ayto de Agreda, Casco Urbano.*
- *Ayto de Tarazona- Soria*
- *Ayto de Tembleque, Toledo*
- *Casco Urbano Ayuntamiento de Askoitia*
- *Ayto Agreda,*
- *Ayto Benamejí Córdoba*
- *AYTO ILLORA , Casco Antiguo*
- *AYTO ILLORA II FASE ILLORA*
- *Pueblo Espejo*
- *Ayto La Victoria Córdoba*
- *Ayto Villanueva de Córdoba*
- *Ayto Cabanillas Navarra*
- *Ayto Pinillas, Navarra*

#### **HISTORICAL BUILDINGS TREATED WITH SENTRITECH**

- *Teatro Reina Sofía de Benavente (Zamora)*
- *Capilla Ba Ñobre (Miño)*
- *Catedral de Santiago de Compostela*
- *Parroquia de Fuenterrabía*
- *Parroquia Cerbón (Soria)*
- *Catedral De Tuí (Pontevedra)*
- *Catedral de Valladolid*
- *Catedral de Orense*
- *Parroquia de Campillo de Aragón (Zaragoza)*
- *Parroquia de San Salvador (Valladolid)*
- *Parroquia de la Sierra (Alava)*
- *Lonja de Valencia*
- *Cripta Güell (Barcelona)*
- *Teatro Principal (Valencia)*
- *Teatro López de Ayala (Badajoz)*
- *Palacio de la Diputación (Badajoz)*
- *Parador Nacional de Guadalupe (Cáceres)*
- *Palacio Mirabell de Guadalupe (Cáceres)*
- *Conservatorio de Música (Badajoz)*
- *Laboratorio agroalimentario de Sevilla*
- *Jefatura Tráfico Sevilla*
- *Centro de Salud (Islas Baleares)*
- *Laboratorio Regional Pecuario (Cuenca)*
- *Iglesia Santa Maria Arenys del Mar Barcelona*
- *Esglesia de Beget (Girona)*
- *Fundación Selgas Fagade la Quinta*

- *Eglesia y rectoría de la cripta de la Colonia Güell. Santa Coloma de Cervelló.*
- *Iglesia San Juan Bautista Avila*
- *Parroquia San Esteban del Valle Avila*
- *El Museo Verdaguer (Casa Joana) de Vallvidrera.*
- *Diversos edificios y la Villa Universitaria de la Universidad Autónoma de Bellaterra.*
- *El Conservatorio de Música de Badalona.*
- *La Facultad de Náutica de la Universidad de Barcelona.*
- *La Facultad de Ingeniería Industrial de la Universidad de Barcelona.*
- *El edificio del ayuntamiento de Vilafranca del Penedés*
- *Ermita San Roque, Burjasot Valencia*
- *Edificio Emborronat, Pza. San Roque Burjasot Valencia*
- *Patronato Turismo Ayuntamiento Pizarra Málaga*
- *Museo Basílica Tardoromana Ceuta*
- *Recientemente contratado el casco antiguo de Tudela , Navarra 118 Viviendas*
- *Ctro. Salud Mairena Aljarafe Sevilla*