



## **ADVICE SUMMARY**

### **APPLICATION FOR REGISTRATION OF A CHEMICAL PRODUCT**

**Product name:** DIATHOR BED BUG KILLER AEROSOL  
**Applicant:** ENSYSTEK AUSTRALASIA PTY LTD  
**Product number:** 70222  
**Application number:** 62764

**Purpose of Application and Description of Use:** Registration of a 12 g/kg amorphous silica aerosol product for control of bed bugs in urban situations.

**Active Constituent(s):** AMORPHOUS SILICA

#### **Regulatory Decision:**

To grant the application subject to the following conditions:

#### **Standard Conditions of Registration/Approval**

1. Containers must meet AgVet Code Regulation 18
2. Label must contain a Date of Manufacture and Batch Number

For full conditions, refer to Standard Conditions for Applications on the APVMA website.

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### State/External Efficacy Reviewer

The results of two laboratory trials, together with supporting information, were presented to support the efficacy of the proposed product, a 12 g/kg ready to use amorphous, water-based, silica aerosol insecticide for the control of bed bugs in urban situations.

The trials investigated the efficacy of the proposed product against the "Sydney" strain of the common bed bug, *Cimex lectularius* (which is highly resistant to synthetic pyrethroids and carbamates) and the "Monheim" strain (which is highly susceptible to all insecticide groups), both by direct spray (topical) application and by exposure to previously treated surfaces (residual). Time to reach 100% mortality was recorded. The results showed that treatment with the proposed product was 100% effective in controlling both resistant and susceptible strains of the common bed bug, both by direct spray and by residual treatment. The time to achieve complete control was less with topical application than with residual application. Complete control was achieved by both application methods 9 days after treatment.

The APVMA accepts the advice of the external efficacy reviewer, that the data presented demonstrate efficacy against bedbugs when the proposed product is used according to the label instructions.

### Data relied on to provide the advice

Data No	Data Source*	Author(s)	Title	Date	Data Type	Data Sub-type	Authorising Party	Inherited Application No.
92280	S	SL Doggett, D Lill	The efficacy testing of diatomaceous earth aerosol to the common bed bug, <i>Cimex lectularius</i>	10 April 2013	Efficacy and safety	Efficacy	Applicant	
92281	S	SL Doggett, RC Russell	Bed bugs - latest trends and developments. AEPMA National Conference 2007	4 July 2007	Efficacy and safety	Efficacy	Public	
92283	S	W Quarles, PS Winn	Diatomaceous earth and stored product pests	May 1996	Efficacy and safety	Efficacy	Public	
92285	S	IB Tarshis	The use of silica aerogel compounds for the control of ectoparasites	December 1962	Efficacy and safety	Efficacy	Public	
92286	S	SL Doggett, DE Dwyer, PF Penas, RC Russell	Bed bugs: clinical relevance and control options	10 January 2012	Efficacy and safety	Efficacy	Public	
92289	S	SL Doggett, MJ Geary, D Lilly, RC Russell	The efficacy of diatomaceous earth against the common bed bug, <i>Cimex lectularius</i>	May 2008	Efficacy and safety	Efficacy	Public	
92291	S	SL Doggett, RC Russell	The resurgence of bed bugs, <i>Cimex</i> spp. (Hemiptera: cimicidae) in Australia	2008	Efficacy and safety	Efficacy	Public	

\* S = Data submitted with the application