THERMACELL®

Human & Pet Health Modeling Study

Prallethrin

Modeling the impact of Prallethrin on people and pets in realistic scenarios.

In 2022, Thermacell partnered with a 3rd party engineering and scientific consulting firm to apply deposition study results to realistic use case scenarios using models adapted from the European Chemical Agency (ECHA). ECHA serves to protect the European consumer and the environment.





Are Thermacell products okay to use outdoors with children and pets?

"Yes. Using data about the amount of Prallethrin left behind after the use of our products, we have adapted existing ECHA risk assessment models to assess long-term use across realistic scenarios. Our research has found that Thermacell is suitable for a range of outdoor uses for families including children, infants, and pets. In each scenario tested, **our products demonstrate acceptable use against ECHA risk assessment standards**."

– Dr. John Hainze, VP of Science & Research at Thermacell

VIEW DATA

Methodology:

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Adapted ECHA modeling methodology and deposition study results were used to simulate the effects of short and long-term use of Prallethrin in the real-life scenarios including people and pets.



Family Scenario

Multiple scenarios modeled to assess the risk of Prallethrin exposure to people and pets.



Exposure Assessment Levels:



Evaluated repeated use of products in 12-hour intervals to model the effects from short to long-term use.



Conclusion:

THE RESULTS

European scientific review based on ECHA risk assessment models with a 3rd party laboratory confirms that Prallethrin impact is below the threshold for concern for a range of outdoor uses including children, infants, and pets.

Prallethrin Use Falls Below The Threshold For Concern

For results related to people and pets, the exposure level from our products in use falls **below an acceptable exposure limit derived from ECHA**.



Prallethrin disperses quickly at below trace levels and breaks down once released into the environment:

- Degrades in atmosphere (38-minute half-life)
- Directly breaks down on sterile water surface when exposed to sunlight (13.6-hour half-life)
- Decomposes in oxygen-containing soil (2.9-day half-life)

Source:

National Center for Biotechnology Information (2022). PubChem Annotation Record for Prallethrin, Source: Hazardous Substances Data Bank (HSDB). Retrieved January 31, 2022 from https://pubchem.ncbi.nlm.nih.gov/source/hsdb/8169.



Study Reference

Chan J. and Cloke D (2022) Human Health Exposure Assessment for Thermacell® Anti Mosquito II Containing Prallethrin (Etoc®), Exponent International Ltd The Lenz Hornbeam Business Park Harrogate HG2 8RE, UK, Document Number: 1502116.UK0 – 9757, 3rd February 2022