

Evaluation Report for Category B, Subcategory 1.3 Application

Application Number: 2011-2428
Application: Changes to the technical grade active ingredient – Product specifications
Product: Lambda-Cyhalothrin Technical Insecticide
Registration Number: 24567
Active ingredients (a.i.): Lambda-cyhalothrin
PMRA Document Number: 2126461

Purpose of Application

The purpose of this application is to amend the technical specifications of the registered product, Lambda-Cyhalothrin Technical Insecticide (Registration Number 24567), by increasing the guarantee of the technical grade active ingredient lambda-cyhalothrin from 85.5% a.i. to 89% a.i.

Chemistry Assessment

Common Name: Lambda-cyhalothrin
IUPAC Name: A 1:1 mixture of (*R*)- α -cyano-3-phenoxybenzyl (1*S*,3*S*)-3-[(*Z*)-2-chloro-3,3,3-trifluoropropenyl]-2,2-dimethylcyclopropanecarboxylate and (*S*)- α -cyano-3-phenoxybenzyl (1*R*,3*R*)-3-[(*Z*)-2-chloro-3,3,3-trifluoropropenyl]-2,2-dimethylcyclopropanecarboxylate
CAS Name: (*R*)-cyano(3-phenoxyphenyl)methyl (1*S*,3*S*)-*rel*-3-[(1*Z*)-2-chloro-3,3,3-trifluoro-1-propen-1-yl]-2,2-dimethylcyclopropanecarboxylate

Lambda-Cyhalothrin Technical Insecticide has the following properties:

Property	Result
Colour and physical state	Dark brown/green solid
Nominal concentration	89.0%
Odour	N/A
Density at 20°C	1.33 g/mL
Vapour pressure	2 x 10 ⁻⁴ mPa (20°C, estimated) 2 x 10 ⁻¹ mPa (60°C, interpolated)
pH	N/A
Solubility in water	0.005 mg/L at 20°C
n-Octanol/water partition coefficient (K _{ow})	Log K _{ow} = 7 at 20°C

The chemistry requirements for Lambda-Cyhalothrin Technical Insecticide have been completed.

Health Assessments

The increase in guarantee for lambda-cyhalothrin does not impact the acute toxicity profile for this technical grade active ingredient.

Environmental and Value Assessments

Environmental and value assessments were not required for this application.

Conclusion

The PMRA has completed an assessment of available information for Lambda-Cyhalothrin Technical Insecticide and has found the information sufficient to amend the product specifications.

References

PMRA

Document

Number

Reference

2065831	2002, Manufacturing process description and supporting data for Lambda-cyhalothrin Technical MRID 45901301, DACO: 2.11.1, 2.11.2, 2.11.3, 2.11.4, 2.12.1, 2.13.1, 2.13.2, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9 CBI
2065833	2007, Manufacturing process description and supporting data for Lambda-cyhalothrin Technical Addendum to MRID 45901301 and 46281401, DACO: 2.11.2 CBI
2065834	2002, Lambda-cyhalothrin - Detailed analysis of technical materials representative of large-scale production, DACO: 2.13.3 CBI

ISSN: 1911-8082

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