Health Canada Santé Canada

Evaluation Report for Category L, Subcategory 1.1 Application

Application Number: 2023-0024
Application: Application Subject to Protection of Proprietary Interests in Pesticide Data (PPIP) Policy – Equivalency/Data Compensation Assessment
Product: ACTICIDE DCOIT
Registration Number: 35196
Active ingredient (a.i.): 4,5-dichloro-2-*n*-octyl-3(2*H*)-isothiazolone
PMRA Document Number: 3557882

Purpose of Application

The purpose of this application was to register the technical product ACTICIDE DCOIT, based on a registered precedent product.

Chemistry Assessment

Common Name: 4,5-dichloro-2-*n*-octyl-3(2*H*)-isothiazolone
IUPAC* Chemical Name: 4,5-dichloro-2-octyl-1,2-thiazol-3(2*H*)-one
CAS† Chemical Name: 4,5-dichloro-2-*n*-octyl-4-isothiazolin-3-one

* International Union of Pure and Applied Chemistry
† Chemical Abstracts Service

ACTICIDE DCOIT has the following properties:

Property	Result
Colour and physical state	Beige solid
Nominal concentration	99.0%
Odour	Sweet, pungent aromatic odour
Density	1.37 g/cm^3 at 20°C
Vapour pressure	1.4 mPa at 20°C
pH	5.1
Solubility in water	2.77 mg/L at 20°C (pH 7)
n-Octanol/water partition coefficient	log K_{ow} = 4.4 at 20°C (pH 6.3)

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The required chemistry data for ACTICIDE DCOIT have been provided, reviewed, and found to be acceptable.

Health, Environmental and Value Assessments

Health, environmental and value assessments were not required for this application.

Conclusion

The Pest Management Regulatory Agency has completed an assessment of the information provided and has found the information acceptable to register ACTICIDE DCOIT.

References

PMRA Document Number	Reference
3422485	2002, Determination of the Melting/Freezing Temperature of 4,5-dichloro-2-octyl-3(2H)-isothiazolone, DACO: 2.14.4 CBI
3422486	2002, Determination of the Boiling Point / Boiling Range of 4,5-dichloro-2-octyl-3(2H)-isothiazolone, DACO: 2.14.5 CBI
3422487	2002, Determination of the Density of Acticide DCOIT, DACO: 2.14.6 CBI
3422489	2020, Discussion of Formation of Impurities, DACO: 2.11.4 CBI
3422490	2008, Product Identity and Composition of Acticide DCOIT, DACO: 2.11,2.11.1,2.11.2,2.11.3 CBI
3422494	2022, Acticide DCOIT 100: Preliminary Analysis, DACO: 2.13.3 CBI
3422497	2022, Colour and Physical State, DACO: 2.14.1,2.14.2 CBI
3422498	2022, Dissociation Constant, DACO: 2.14.10
3422499	2022, Octanol/Water Partition Coefficient, DACO: 2.14.11
3422500	2022, UV/Visible Absorption, DACO: 2.14.12
3422501	2022, Stability (Temperature, Metals), DACO: 2.14.13
3422502	2022, Odour, DACO: 2.14.3
3422503	2022, Water Solubility, DACO: 2.14.7
3422504	2022, Solvent Solubility, DACO: 2.14.8
3422505	2022, Vapour Pressure, DACO: 2.14.9
3439442	2008, Acticide DCOIT 100% Determination of Color, Physical State and Odor, DACO: 2.14.1,2.14.2,2.14.3 CBI
3439443	2002, Determination of the Partition Coefficient (n-octanol/water) of DCOIT at a Range of Temperatures and pHs, DACO: 2.14.11 CBI
3439444	2009, Acticide DCOIT 100% Determination of Spectra, DACO: 2.14.12 CBI
3439445	2003, DC-OIT Standard Water Solubility, DACO: 2.14.7 CBI
3439446	2016, Determination of the solubility of Acticide DCOIT 100 in organic solvents, DACO: 2.14.8 CBI
3439447	2003, Determination of Vapour Pressure of 4,5-Dichloro-2-octyl-3(2H)-isothiazolone, DACO: 2.14.9 CBI
3559535	2024, Confirmation the Batch data reported in [CBI removed] was from Production-scale batches, DACO: 2.13.3 CBI
3551603	2020, [CBI removed] internal standard Certificate of Analysis, DACO: 2.13.2 CBI
3551604	2018, Determination of the accelerated storage stability, the corrosion characteristics and the pH value of ACTICIDE DCOIT 100 at 54oC over 14 days, DACO: 2.14.14 CBI