

Evaluation Report for Category B, Subcategory 1.2 Application

Application Number: 2015-6818
Application: New Technical Grade Active Ingredient Product Chemistry – New Source (Site) New Registrant
Product: Sharda Clethodim Technical
Registration Number: 32631
Active ingredients (a.i.): Clethodim
PMRA Document Number: 2694131

Purpose of Application

The purpose of this application was to register a new source of the active clethodim, Sharda Clethodim Technical.

Chemistry Assessment

Common Name: Clethodim
IUPAC* Chemical Name: (5*E*)-2-[(1*E*)-*N*-{[(2*E*)-3-chloroprop-2-en-1-yl]oxy}propanimidoyl]-5-[(2*E*)-2-(ethylsulfanyl)propyl]-3-hydroxycyclohex-2-en-1-one
CAS† Chemical Name: 2-[1-[[[(2*E*)-3-chloro-2-propen-1-yl]oxy]imino]propyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one

* International Union of Pure and Applied Chemistry

† Chemical Abstracts Service

Sharda Clethodim Technical has the following properties:

Property	Result
Colour and physical state	Clear amber viscous liquid
Nominal concentration	97.50%
Odour	Petroleum oil-like odour
Density	1.13 g/mL at 20°C
Vapour pressure	<11.4 x 10 ⁻² mPa Pa (at 25°C)
pH	4.18

Property	Result									
Solubility in water	0.086 g/L (pH 4.33, 18.2°C) 4.67 g/L (pH 6.56, 18.4°C) 16.1 g/L (pH 7.63, 18.8°C)									
n-Octanol/water partition coefficient	<table border="1"> <thead> <tr> <th>pH</th> <th>temp (°C)</th> <th>log K_{ow}</th> </tr> </thead> <tbody> <tr> <td>6.32</td> <td>19.2</td> <td>1.87</td> </tr> <tr> <td>7.84</td> <td>18.4</td> <td>0.394</td> </tr> </tbody> </table>	pH	temp (°C)	log K _{ow}	6.32	19.2	1.87	7.84	18.4	0.394
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The required chemistry data for Sharda Clethodim Technical 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 available information and can support the registration of Sharda Clethodim Technical, a new source of the active clethodim.

References

PMRA Document Number	References
2591522	2015, Applicant's Name and Office Address, Formulating Plant and address, Product Identity for Sharda Clethodim Technical, DACO: 2.1,2.14.13,2.2,2.3,2.3.1,2.4,2.5,2.6,2.7,2.8,2.9 CBI
2591523	2015, Applicant's Name and Office Address, Formulating Plant and address, Product Identity and for Sharda Clethodim Technical, DACO: 2.1,2.14.13,2.2,2.3,2.3.1,2.4,2.5,2.6,2.7,2.8,2.9 CBI
2591525	2015, Manufacturing Process of Clethodim, DACO: 2.11.3 CBI
2591526	2015, Justification of Impurities, DACO: 2.11.4 CBI
2591527	2015, COMPOSITION of Clethodim Technical, DACO: 2.12,2.12.1 CBI
2591528	2015, DACO-2.12.1-YB, DACO: 2.12,2.12.1,2.13.3 CBI
2591529	2015, Batch data: Manufacturing Dates, DACO: 2.13.3 CBI
2591530	2014, Determination of Active Content and Impurity Profile of Clethodim, DACO: 2.13,2.13.1,2.13.2,2.13.3 CBI
2591531	2014, Determination of Physical-chemical properties of Clethodim, DACO: 2.14,2.14.1,2.14.11,2.14.12,2.14.13,2.14.14,2.14.15,2.14.2,2.14.3,2.14.5,2.14.6,2.14.7,2.14.8,2.14.9,830.7000 CBI
2591532	2015, Impurities of Toxicological concern; Dissociation Constant, DACO: 2.13.4,2.14.10 CBI

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