



Evaluation Report for Category B, Subcategory 1.1 Application

Application Number: 2014-0588
Application: Changes TGAI or ISP Product Chemistry – New Source (site) same registrant
Product: Mesotrione Technical Herbicide
Registration Number: 27831
Active ingredients (a.i.): Mesotrione
PMRA Document Number : 2462345

Purpose of Application

The purpose of this application was to add a new source of Mesotrione Technical Herbicide.

Chemistry Assessment

Common Name: Mesotrione
IUPAC* Chemical Name: 2-[4-(methanesulfonyl)-2-nitrobenzoyl]cyclohexane-1,3-dione or 2-(4-mesyl-2-nitrobenzoyl)cyclohexane-1,3-dione
CAS† Chemical Name: 2-[4-(methylsulfonyl)-2-nitrobenzoyl]-1,3-cyclohexanedione

* International Union of Pure and Applied Chemistry

† Chemical Abstracts Service

Mesotrione Technical Herbicide has the following properties:

Property	Result										
Colour and physical state	Light tan solid										
Nominal concentration	96.8% (based on dry weight)										
Odour	Slight odour, sweet										
Density	1.46 g/mL										
Vapour pressure	$< 5.7 \times 10^{-3}$ mPa (at 20°C)										
pH	3.42										
Solubility in water at 20°C	<table><thead><tr><th>pH</th><th>Solubility (g/L)</th></tr></thead><tbody><tr><td>unbuffered</td><td>0.16</td></tr><tr><td>4.8</td><td>2.2</td></tr><tr><td>6.9</td><td>15</td></tr><tr><td>9</td><td>22</td></tr></tbody></table>	pH	Solubility (g/L)	unbuffered	0.16	4.8	2.2	6.9	15	9	22
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unbuffered	0.16										
4.8	2.2										
6.9	15										
9	22										

Property	Result	
n-Octanol/water partition coefficient	<u>pH</u>	<u>Log K_{ow}</u>
	unbuffered	0.11
	5	-1.076
	7, 9	< -1

The chemistry requirements for Mesotrione Technical Herbicide have been fulfilled.

Health, Environmental and Value Assessments

Health, environmental and value assessments were not require with this application.

Conclusion

The Pest Management Regulatory Agency has completed an assessment of information provided and is able to support the addition of a new source of Mesotrione Technical Herbicide.

References

PMRA Document Number	References
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