

Evaluation Report for Category B, Subcategory 1.3 Application

Application Number: 2021-2098
Application: Changes to TGAI (Product Chemistry) - Specifications
Product: Metsulfuron Methyl Technical Herbicide
Registration Number: 20213
Active ingredient (a.i.): Metsulfuron-methyl
PMRA Document Number: 3362983

Purpose of Application

The purpose of this application was to update the manufacturing process for Metsulfuron Methyl Technical Herbicide.

Chemistry Assessment

Common Name: Metsulfuron-methyl
IUPAC* Chemical Name: methyl 2-[[[4-methoxy-6-methyl-1,3,5-triazin-2-yl]carbamoyl]sulfamoyl]benzoate
CAS† Chemical Name: methyl 2-[[[[4-methoxy-6-methyl-1,3,5-triazin-2-yl]amino]carbonyl]amino]sulfonyl]benzoate

* International Union of Pure and Applied Chemistry

† Chemical Abstracts Service

Metsulfuron Methyl Technical Herbicide has the following properties:

Property	Result
Colour and physical state	White to pale yellow, solid
Nominal concentration	97.7%
Odour	Faint, sweet ester-like odour
Density	1.47 g/cm ³
Vapour pressure	7.7x10 ⁻⁹ mPa at 25°C
pH	4.1

Property	Result
Solubility in water	109 mg/L (distilled water)
	In 0.05 M sodium phosphate buffer:
	<u>pH</u> <u>Solubility (g/L)</u>
	6.1 9.5
	5.4 1.75
4.6 0.27	
n-Octanol/water partition coefficient	<u>pH</u> <u>log K_{ow}</u>
	4 1.0
	7 -1.87
	10 -2.2

The required chemistry data for Metsulfuron Methyl Technical Herbicide 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 sufficient to support the amendment of the registration of Metsulfuron Methyl Technical Herbicide to update the manufacturing process.

References

PMRA Document Number	Reference
3230986	2020, Technical Grade Metsulfuron Methyl (T6376) Manufacturing Description and Formation of Impurities, DACO: 2.0, 2.11, 2.11.1, 2.11.2, 2.11.3 CBI
3230987	2020, Technical Grade Metsulfuron Methyl (T6376) Manufacturing Description and Formation of Impurities, DACO: 2.0, 2.11, 2.11.1, 2.11.2, 2.11.3 CBI
3230988	2019, Validation of the Analytical Method for Determination of Metsulfuron Methyl (T6376) in Technical Grade Metsulfuron Methyl, DACO: 2.13, 2.13.1 CBI
3230989	2019, Validation of the Analytical Method for Determination of Metsulfuron Methyl (T6376) in Technical Grade Metsulfuron Methyl, DACO: 2.13, 2.13.1 CBI
3230990	2020, Description and Validation of the Analytical Methods for Determination of Impurities in Technical Grade Metsulfuron Methyl (T6376), DACO: 2.13, 2.13.1 CBI
3230991	2020, Description and Validation of the Analytical Methods for Determination of Impurities in Technical Grade Metsulfuron Methyl (T6376), DACO: 2.13, 2.13.1 CBI
3230992	2020, Batch Analysis of Metsulfuron Methyl (T6376) Technical, DACO: 2.13, 2.13.2, 2.13.3 CBI
3230993	2020, Batch Analysis of Metsulfuron Methyl (T6376) Technical, DACO: 2.13, 2.13.2, 2.13.3 CBI
3230994	2020, Batch Analysis of Metsulfuron Methyl (T6376) Technical, DACO: 2.13, 2.13.2, 2.13.3 CBI
3230995	2020, Batch Analysis of Metsulfuron Methyl (T6376) Technical, DACO: 2.13, 2.13.2, 2.13.3 CBI
3230996	2020, Batch Analysis of Metsulfuron Methyl (T6376) Technical, DACO: 2.13, 2.13.2, 2.13.3 CBI
3230997	2020, Batch Analysis of Metsulfuron Methyl (T6376) Technical, DACO: 2.13, 2.13.2, 2.13.3 CBI
3359421	2022, FMC Response to PMRA Request for Clarification - Sub. No. 2021-2098, DACO 2.12, 2.13.3 CBI

© Her Majesty the Queen in Right of Canada, as represented by the Minister of Health Canada, 2022

All rights reserved. No part of this information (publication or product) may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in a retrieval system, without prior written permission of Health Canada, Ottawa, Ontario K1A 0K9.