



Evaluation Report for Category B, Subcategory 4.6 Application

Application Number: 2014-2234
Application: To fulfill requirements (non-Section 12) of full registration
Product: Penthiopyrad Technical Fungicide
Registration Number: 30330
Active ingredients (a.i.): Penthiopyrad
PMRA Document Number : 2548206

Purpose of Application

The purpose of this application was to address chemistry and toxicological data requirements of the fully registered product, Penthiopyrad Technical Fungicide.

Chemistry Assessment

Common Name: Penthiopyrad Technical Fungicide

IUPAC Chemical Name: (RS)-N-[2-(1,3-dimethylbutyl)-3-thienyl]-1-methyl-3-(trifluoromethyl) pyrazole-4-carboxamide

CAS Chemical Name: N-[2-(1,3-dimethylbutyl)-3-thienyl]-1-methyl-3-(trifluoromethyl)-1*H*-pyrazole-4-carboxamide (9CI)

Penthiopyrad Technical Fungicide has the following properties:

Property	Result
Colour and physical state	White solid
Odour	Odourless
Nominal concentration	99.5 %
Melting range	108.7 ± 0.2°C
Density at 20°C	1.256 g/mL
pH	5.9
Dissociation constant	pKa = 10.0 ± 0.16
Ultraviolet (UV)-visible spectrum	$\lambda_{\text{max}} \approx 226$ nm under neutral, acidic and basic conditions

Property	Result	
Solubility in water at 20°C	<u>pH</u>	<u>Solubility (mg/L)</u>
	4	2.535
	7	1.375
	10	1.657
Solubility in organic solvents at 20°C	<u>Solvent</u>	<u>Solubility (g/L)</u>
	Acetone	557
	Dichloromethane	531
	Methanol	402
	Ethyl acetate	349
	Ethanol	234.5
	Toluene	67.0
	Xylene	42.7
	Hexane	0.75
Heptane	0.74	
n-Octanol-water partition coefficient (K _{OW})	<u>pH</u>	<u>log K_{OW}</u>
	4	4.36
	7	4.62
	10	4.54

The chemistry requirements for Penthiopyrad Technical Fungicide have been fulfilled.

Health Assessments

Two toxicity studies with a penthiopyrad metabolite were received and reviewed. It was determined that this did not impacted the penthiopyrad risk assessment.

Residues and exposure assessments were not required for this application.

Environmental and Value Assessments

Environmental and value assessments were not required for this application

Conclusion

The requirements of full registration of Penthiopyrad Technical Fungicide have been fulfilled.

References

PMRA

Document

Number	Reference
2435887	2014, Five Batch Analysis of Penthiopyrad Technical Product, DACO: 2.13.3 CBI
2435889	2014, PAM: Toxicity Study by Dietary Administration to Han Winstar Rats for 4 Weeks, DACO: 4.3.3

2438736 2014, Gene Mutation Test with M11 using Mouse Lymphoma L5178Y Cells (LMA), DACO: 4.5.5

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