

Evaluation Report for Category B, Subcategory 4.1 Application

Application Number: 2007-8727
Application: Conversion to full registration without consultation
Product: Pinoxaden Technical
Registration Number: 28149
Active ingredients (a.i.): Pinoxaden (PRN)
PMRA Document Number : 1894141

Purpose of Application

The purpose of this application was to convert Pinoxaden Technical (Registration Number 28149) from conditional to full registration. The initial registration decision is presented in Regulatory Note REG2006-14, Pinoxaden.

Chemistry Assessment

Common name: Pinoxaden

Chemical name (IUPAC): 8-(2,6-diethyl-p-tolyl)-1,2,4,5-tetrahydro-7-oxo-7H-pyrazolo[1,2-d][1,4,5]oxadiazepin-9-yl 2,2-dimethylpropionate

Pinoxaden Technical has the following properties:

Property	Results
Colour and physical state	White to light beige powder
Nominal concentration	98 %
Odour	Odourless to sweet odour
Density	$1.16 \times 10^3 \text{ kg/m}^3$
Vapour pressure	$2.0 \times 10^{-7} \text{ Pa}$ at 20°C $4.6 \times 10^{-7} \text{ Pa}$ at 25°C
pH	4.9 at 25°C
Solubility in water	20 mg/L at 25°C
n-Octanol/water partition coefficient	log Kow = 3.2

The chemistry requirements for Pinoxaden Technical have been completed.

Health Assessments

Refer to the Regulatory Note REG2006-14, Pinoxaden for a detailed assessment of the toxicological database, occupational exposure assessment and food residue assessment for Pinoxaden Technical (Registration Number 28149), A1230C 100 EC (Crestivo Herbicide, Registration Number 28150) and Adigor Adjuvant (Registration Number 28151).

To support the full registration of pinoxaden end-use products, additional data regarding the enforcement method for analysis of pinoxaden and the metabolites, and the freezer storage stability for wheat processed fractions were submitted. This will not have any impact on the level of pinoxaden residues. Therefore, the dietary risk is not expected to increase and will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

Environmental Assessment

Pinoxaden enters the environment when used as a herbicide for the control of specific grass weeds in spring wheat (*Triticum aestivum*), durum wheat (*Triticum turgidum*) and barley (*Hordeum* spp.) in the Prairie provinces and the Peace River, Okanagan and Creston Flats regions of British Columbia. Additional studies on the acute toxicity of pinoxaden to bees, fish and daphnia were submitted to the PMRA to support the conversion to full registration. No additional risk was identified upon review of these studies. Pinoxaden is only toxic to terrestrial plants from on-field application, therefore, a 1 metre buffer zone is required during application. There are no risks to terrestrial organisms and aquatic organisms. There are two major transformation products formed in the environment, M2 and M3, which are not toxic to terrestrial and aquatic organisms.

Value Assessment

A value assessment was not required for this application

Conclusion

The PMRA has conducted a review of the available information can support the conversion of Pinoxaden Technical (Registration Number 28149) from conditional to full registration.

References

Studies/Information Provided by Applicant/Registrant

<u>PMRA #</u>	<u>Reference</u>
1521786	2007, Final Report: An Acute Oral Toxicity Study with the Honey Bee, DACO: 9.2.4.2 CBI
1521788	2007, Final Report: A 96-Hour Flow Through Acute Toxicity Test with the Saltwater Mysid, DACO: 9.4.2 CBI
1521790	2007, Final Report: A 96-Hour Flow Through Acute Toxicity Test with the Rainbow Trout, DACO: 9.5.2.1 CBI
1521792	2007, Final Report: A 7-Day Static-Renewal Toxicity Test with the Duckweed (Lemna gibba G3), DACO: 9.8.5 CBI
1521793	2007, Template: A 7-Day Static-Renewal Toxicity Test with the Duckweed (Lemna gibba G3), DACO: 9.8.5 CBI
1521794	2007, Final Report: A 7-Day Static-Renewal Toxicity Test with the Duckweed (Lemna gibba G3), DACO: 9.8.5 CBI
1521795	2007, Template: A 7-Day Static-Renewal Toxicity Test with the Duckweed (Lemna gibba G3), DACO: 9.8.5 CBI
1521796	2007, Final Report: A 7-Day Static-Renewal Toxicity Test with the Duckweed (Lemna gibba G3), DACO: 9.8.5 CBI

Published Information

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Harris, L.E. 1975. Guide for Estimating Toxic Residues in Animal Feeds or Diets. U.S.EPA, Washington. EPA/540/9-75-019 (NTIS reference #: PB 243 748).

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Urban DJ; Cook NJ. 1986. Hazard Evaluation Division, Standard Evaluation Procedure, Ecological Risk Assessment. EPA 540/9-85-001. US EPA, Washington, DC.

U.S. EPA. (1988) Recommendations for and documentations of biological values for use in risk assessment. PB88 179874, EPA/600/6-87/008. Cincinnati, Ohio.

Wauchope, R.D. 1978. The pesticide content of surface water draining from agricultural fields - a review. J. Environ. Qual. 7(4): 459-472.

Willis, G.H. and McDowell, L.L. 1987. Pesticide persistence on foliage. Rev. Environ. Contam. Toxicol. 100:23-73.

Wolf, T and B.C. Caldwell, 2001. Development of a Canadian spray drift model for the determination of buffer zone distances. In Expert Committee on Weeds, Proceedings of the 2001 National Meeting, Quebec City, Sainte Anne de Bellevue, Quebec: ECW-CEM. D. Bernier, DRA Campbell, D. Cloutier, Eds.

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