

Evaluation Report for Category B, Subcategory 1.2 Application

Application Number: 2010-1551
Application: New Source of Technical Grade Active Ingredient by a New Registrant
Product: Chlorpyrifos Agrogill Technical Grade Active Ingredient
Registration Number: 31417
Active ingredients (a.i.): chlorpyrifos
PMRA Document Number: 2432797

Background

The source of chlorpyrifos used to determine chemical equivalence was Registration Number 25823.

Purpose of Application

The purpose of this application was to register a new source of the active ingredient, chlorpyrifos, by a different Registrant.

Chemistry Assessment

Common Name: Chlorpyrifos
Chemical Name:
IUPAC ; *O,O*-diethyl *O*-3,5,6-trichloro-2-pyridyl phosphorothioate
CAS: *O,O*-diethyl *O*-(3,5,6-trichloro-2-pyridinyl) phosphorothioate

Chlorpyrifos Agrogill Technical Grade Active Ingredient has the following properties:

Property	Result
Colour and physical state	Light yellow solid
Nominal concentration	98.6%
Odour	Mild mercaptan odour
Density	1.3730 g/mL
Vapour pressure	4.25×10^{-3} Pa at 25°C
pH	7.42

Property	Result
Solubility in water	pH
	5.07
	7.01
	9.05
Solubility (mg/L)	1.37
	1.42
n-Octanol/water partition coefficient	1.45
	log K _{ow} = 4.76

The chemistry requirements for Chlorpyrifos Agrogill Technical Grade Active Ingredient have been completed.

Health Assessments

The toxicological profile for Chlorpyrifos Agrogill Technical Grade Active Ingredient is the same as that on file for currently registered sources of chlorpyrifos. Chlorpyrifos is highly acutely toxic by the oral and inhalation routes of exposure and slightly acutely toxic by the dermal route of exposure. It is mildly irritating to both skin and eyes, but is not a dermal sensitizer.

Environmental Assessment

The impurities in the new source of the technical grade active chlorpyrifos are in trace amounts and are not of TSMP concern. Therefore, the environmental risk is not expected to increase significantly when the new source of chlorpyrifos is used.

Value Assessment

A value assessment is not required for technical grade active ingredient products.

Conclusion

The PMRA has completed an evaluation of the subject application and has determined that it can support the registration of Chlorpyrifos Agrogill Technical Grade Active Ingredient.

References

PMRA Document Number	Reference
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1894592	DACO2.2 Manufacturer's Office and Factory address , DACO: 2.2
1894593	DACO 2.3 Product Trade Name , DACO: 2.3
1894594	DACO 2.4 Common name , DACO: 2.4
1894595	DACO 2.5 Chemical Name , DACO: 2.5
1894596	Chemical Abstracts Registry Number , DACO: 2.6
1894597	STRUCTURAL FORMULA , DACO: 2.7
1894598	DACO 2.8Molecular formula , DACO: 2.8
1894599	DACO 2.9 Molecular weight , DACO: 2.9
1894600	MANUFACTURING SUMMARY , DACO: 2.11.1 CBI
1894601	DACO 2.11.2 Description of starting materials , DACO: 2.11.2 CBI
1894602	Material Safety Data Sheet – [CBI removed] , DACO: 2.11.2
1894603	Material Safety Data Sheet - [CBI removed] , DACO: 2.11.2
1894604	Material Safety Data Sheet - [CBI removed], DACO: 2.11.2
1894605	Material Safety Data Sheet - [CBI removed], DACO: 2.11.2
1894606	Material Safety Data Sheet - [CBI removed] , DACO: 2.11.2
1894607	Material Safety Data Sheet [CBI removed] , DACO: 2.11.2
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1894609	Material Safety Data Sheet - [CBI removed], DACO: 2.11.2
1894610	2.11.3 Detailed Production Process , DACO: 2.11.3 CBI
1894611	2.11.4 Discussion of formation of impurities , DACO: 2.11.4
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1894614	2004, Studies on the impurity profile of Chlorpyrifos technical (Five batch analysis), DACO: 2.13.1,2.13.2,2.13.3 CBI
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1894617	2008, Specific Gravity of Chlorpyrifos technical, DACO: 2.14.6
1894618	2009, WATER SOLUBILITY OF CHLORPYRIFOS TECHNICAL, DACO: 2.14.7
1894619	2008, SOLUBILITY OF CHLORPYRIFOS TECHNICAL IN ORGANIC SOLVENTS, DACO: 2.14.8
1894620	2009, VAPOUR PRESSURE OF CHLORPYRIFOS TECHNICAL, DACO: 2.14.9
1894621	2009, PARTITION COEFFICIENT (n-OCTANOL/WATER) OF CHLORPYRIFOS TECHNICAL, DACO: 2.14.11
1894622	2009, UV-VISIBLE ANALYSIS OF CHLORPYRIFOS TECHNICAL, DACO: 2.14.12
1894623	2009, DETERMINATION OF STABILITY OF CHLORPYRIFOS TECHNICAL WITH AND WITHOUT METALS AND METAL IONS AT NORMAL AND ELEVATED TEMPERATURE, DACO: 2.14.13
1894624	THE SAMPLES ARE BEING SENT DIRECT FROM THE FACTORY TO PMRA., DACO: 2.15
1894625	2008, VALIDATION OF ANALYTICAL METHOD FOR ACTIVE INGREDIENT CONTENT ANALYSIS OF CHLORPYRIFOS TECHNICAL BY HPLC, DACO: 2.16
1894626	2008, pH OF CHLORPYRIFOS TECHNICAL, DACO: 2.16
2066292	DACO2.2 Manufacturer Office and Factory address, DACO: 2.2 CBI
2066293	Revised detailed production process with [CBI removed] details DACO 2.11.3, DACO: 2.11.3 CBI
2066294	2011, Preliminary analyses of five representative production batches of chlorpyrifos technical grade active ingredient (TGAI) to determine % chlorpyrifos and to quantify its associated impurities, DACO: 2.13.1,2.13.2,2.13.3 CBI
2066296	2011, Analysis of Chlorpyrifos active ingredient content in five representative production batches of Chlorpyrifos technical by Gas Chromatography, DACO: 2.13.3 CBI
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2066302	FAO discussion on formation of [CBI removed] DACO 2.13.4, DACO: 2.13.4 CBI
2251212	2012, Characterization of Chlorpyrifos technical for [CBI removed] impurities, DACO: 2.13.4 CBI

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