

Evaluation Report for Category B, Subcategory 1.2 Application

Application Number: 2014-0997
Application: New technical grade active ingredient product chemistry – New source (site) for a new registrant
Product: Scotts Ferric Phosphate Technical
Registration Number: 31815
Active ingredients (a.i.): Iron (present as ferric phosphate)
PMRA Document Number : 2494867

Purpose of Application

The purpose of this application was to register Scotts Ferric Phosphate Technical, a new source of active ingredient iron (present as ferric phosphate) to be used in the new domestic class end-use product Scotts EcoSense Slug-B-Gon Slug and Snail Bait II, which was reviewed under application number 2014-1013.

Chemistry Assessment

Common Name: Ferric phosphate
IUPAC* Chemical Name: Iron (III) phosphate or ferric phosphate
CAS† Chemical Name: Phosphoric acid iron (3+) salt (1:1)

* International Union of Pure and Applied Chemistry

† Chemical Abstracts Service

Scotts Ferric Phosphate Technical has the following properties:

Property	Result
Colour and physical state	Pale pink powder
Nominal concentration	29.78% iron (present as ferric phosphate)
Odour	Odourless
Density	2.75 (relative density, 21.7°C) 300-700 kg/m ³ (bulk density)
Vapour pressure	N/A
pH	5

Property	Result
Solubility in water	75.6 mg/L (10°C, pH 3.3) 82.6 mg/L (20°C, pH 3.3-3.4) 77.9 mg/L (30°C, pH 3.3) 1.86×10^{-12} g/L (pH 7, 25°C)
n-Octanol/water partition coefficient	N/A

The chemistry requirements for Scotts Ferric Phosphate Technical have been fulfilled.

Health Assessments

Since the new source of technical grade active ingredient is chemically equivalent to a registered source of technical grade active ingredient, Ferric Phosphate Technical Active Ingredient (Registration Number 26101), the toxicology profile of the new technical grade active ingredient is considered to be the same as that of the registered technical grade active ingredient.

The submitted toxicology studies on the Scotts EcoSense Slug-B-Gon Slug and Snail Bait II indicate that it is of low acute toxicity by the oral, dermal, and inhalation routes, minimally irritating to the eyes, non-irritating to the skin, and is not a dermal sensitizer.

The rate of application (5 g/m^2), type of formulation (granular), and method of application (hand dispersed) of Scotts EcoSense Slug-B-Gon Slug and Snail Bait II are similar to some previously registered similar end-use products for domestic uses (Registration Numbers 26102, 29120, and 28375).

Significant exposure to the domestic users from the application of Scotts EcoSense Slug-B-Gon Slug and Snail Bait II is not anticipated due to the granular form of the end-use product and the nature of application directed to the soil around or near the plants by scattering.

The risk due to exposure from domestic application is minimal when the Scotts EcoSense Slug-B-Gon Slug and Snail Bait II is used according to the label directions, which include precautionary and hygiene statements.

Since Scotts EcoSense Slug-B-Gon Slug and Snail Bait II is intended for use as bait for snails and slugs in gardens and is to be applied to soil with no direct contact exposure to food crops, negligible food residue exposure is expected from the proposed use.

There is no risk anticipated from exposure to ferric phosphate from drinking water because Scotts EcoSense Slug-B-Gon Slug and Snail Bait II is for application to soil surface and not directly to water.

Since no dietary exposure to ferric phosphate and/or its metabolites is anticipated from this use pattern, the specification of a Maximum Residue Limit is not required.

Environmental and Value Assessments

Environmental and value assessments were not required for this application.

Conclusion

The PMRA has completed a review of the information submitted in support of Scotts Ferric Phosphate Technical and deemed it sufficient to support a full registration.

References

PMRA Document Number	Reference
2391869 2406922	2009, Iron orthophosphate: Determination of Melting/Freezing Temperature and Water Solubility, DACO: 2.14.1,2.14.2,2.14.4, 2.14.7 CBI
2493836	2011, IP 27 Iron orthophosphate: Determination of Relative Density, DACO: 2.14.6 CBI
2391871	2009, Dissociation constants of phosphates and a number of related salts, DACO: 2.14.10 CBI
2406930	2014, Data Waiving Boiling Point/Boiling Range, Solvent Solubility, Vapour Pressure and Octanol/Water Partition Coefficient – Iron Orthophosphate, DACO: 2.14.11,2.14.5,2.14.8,2.14.9 CBI
2404672	2014, 2.1-2.9, DACO: 2.1,2.2,2.3,2.3.1,2.4,2.5,2.6,2.7,2.8,2.9 CBI
2404693	2012, Determination of Iron, Phosphate and Four Impurities in Five Batches of Ferric Phosphate, DACO: 2.13.1,2.13.2,2.13.3 CBI
2493830	2011, Chemical Safety Report, DACO: 2.11.1 CBI
2406921	2014, Ferric Orthophosphate Production, DACO: 2.11.2,2.11.3,2.11.4 CBI
2493835	2014, Safety Data Sheet E 53-81 B, DACO: 2.14.3 CBI
2406926	2014, Data Waiving UV/Visible Absorption Spectra, DACO: 2.14.12 CBI
2406927	2014, Data Waiving Stability, DACO: 2.14.13,2.14.14 CBI
2493831	2015, 2.11.2 Description of starting materials + Suppliers SDS TDS, DACO: 2.11.2 CBI
2493832	2015, 2.11.3 Detailed Production Process Description + flow chart / Ferric Orthophosphate Production, DACO: 2.11.3 CBI
2493833	2015, 2.11.4 Discussion of Formation of Impurities, DACO: 2.11.4 CBI
2493834	2009, Iron orthophosphate: Determination of Melting/Freezing Temperature and Water Solubility, DACO: 2.14.1,2.14.2,2.14.4, 2.14.7 CBI
2493836	2011, IP 27 Iron orthophosphate: Determination of Relative Density, DACO: 2.14.6 CBI
2493839	2014, Data Waiving Stability, DACO: 2.14.13,2.14.14 CBI
2493842	2014, Data Waiving Boiling Point/Boiling Range, Solvent Solubility, Vapour Pressure and Octanol/Water Partition Coefficient – Iron Orthophosphate, DACO: 2.14.11,2.14.5,2.14.8,2.14.9 CBI

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