

Evaluation Report for Category B, Subcategory 2.1, 2.3, 2.4, 2.5 Application

Application Number: 2019-2707
Application: New End-Use Product (Product Chemistry) – Guarantee, Identity of Formulants, Proportion of Formulants, Formulation Type
Product: Dry Fiesta Broadleaf Weed Killer for Lawns RTU
Registration Number: 34625
Active ingredient (a.i.): Iron (present as ferric sodium EDTA trihydrate)
PMRA Document Number: 3383739

Purpose of Application

The purpose of this application was to register a domestic end-use product containing the active ingredient iron (present as ferric sodium EDTA trihydrate) for control or suppression of weeds, moss, and algae on turfgrass.

Chemistry Assessment

Dry Fiesta Broadleaf Weed Killer for Lawns RTU is formulated as a granular product containing iron (present as ferric sodium EDTA trihydrate) at 0.91%. This end-use product has a density of 0.605-0.699 g/mL and pH of 5.89. The required chemistry data for Dry Fiesta Broadleaf Weed Killer for Lawns RTU have been provided, reviewed and found to be acceptable.

Health Assessments

The data package in support of Dry Fiesta Broadleaf Weed Killer for Lawns RTU was based on the toxicological database for Fiesta Lawn Weed Killer Granule which consisted of acute toxicity studies (acute oral, dermal, and inhalation toxicity), irritation testing (dermal and eye), and dermal sensitization testing. Dry Fiesta Broadleaf Weed Killer for Lawns RTU is of low toxicity by the oral, dermal and inhalation routes, is minimally irritating to eyes and skin, and is not dermal sensitizer.

Potential exposure to Dry Fiesta Broadleaf Weed Killer for Lawns RTU may occur when applying the end-use product or entering treated sites. Exposure to individuals handling Dry Fiesta Broadleaf Weed Killer for Lawns RTU is expected to result in acceptable risk when the product is used according to label directions. Precautionary and personal protective equipment statements on the product label aimed at mitigating exposure are considered adequate to protect individuals from any potential risk due to user exposure.

Bystander exposure is expected to result in acceptable risk when the product, Dry Fiesta Broadleaf Weed Killer for Lawns RTU is used according to label directions. Health risks to individuals in residential areas are acceptable when the product is used according to label directions.

A dietary exposure assessment was not required with this application.

Dry Fiesta Broadleaf Weed Killer for Lawns RTU is not proposed for food or feed use. Dietary exposure from drinking water is expected to be negligible as the label has the necessary mitigative measures to limit contamination of drinking water from the labelled uses of Dry Fiesta Broadleaf Weed Killer for Lawns RTU. Consequently, health risks from residues of iron, as FeNaEDTA, in drinking water are acceptable.

Environmental Assessment

The environmental risks associated with the use of Dry Fiesta Broadleaf Weed Killer for Lawns RTU are acceptable when used according to label directions. Environmental concerns have been mitigated through adequate statements on the product label.

Value Assessment

There is a certain segment of users, especially homeowners, who prefer granular products that are easily applied and handled. Therefore, the formulation of Dry Fiesta Broadleaf Weed Killer for Lawns RTU as a domestic granular product provides value to those users.

Value information submitted for review included data from studies conducted in greenhouses, on park lawns, and replicated field trials. This value information in conjunction with the precedent registration collectively demonstrated that the application of Dry Fiesta Broadleaf Weed Killer for Lawns RTU as per the label instructions can be expected to provide acceptable control or suppression of the labelled weeds, moss, and algae. Turfgrass consisting of one or more of perennial ryegrass, fescues, and Kentucky bluegrass can be expected to have an adequate margin of tolerance to the same treatments.

Conclusion

The Pest Management Regulatory Agency has completed an assessment of the information provided, and has found the information sufficient to support the registration of Dry Fiesta Broadleaf Weed Killer for Lawns RTU.

References

A. List of Studies/Information Submitted by Registrant

PMRA Document Number	Reference
3002899	2019, Binder #1 Dry Fiesta EUP Product Chemistry, DACO: 3.0,3.1,3.1.1,3.1.2, 3.1.3,3.1.4,3.2,3.2.1,3.2.2,3.2.3,3.3.1,3.4,3.4.1,3.4.2,3.5,3.5.1,3.5.10,3.5.11,3.5.12, 3.5.13,3.5.14,3.5.15,3.5.2,3.5.3,3.5.4,3.5.5,3.5.6,3.5.7,3.5.8,3.5.9,3.7 CBI
3101403	2020, Dry Fiesta MUP: Accelerated Storage Stability and Corrosion Characteristics, DACO: 3.5.10 CBI
3193828	2019, Dry Fiesta Physical and Chemical Characteristics: Colour, Physical State, Odour, Oxidation/Reduction, Flammability, pH and Bulk Density, DACO: 3.5,3.5.1,3.5.11,3.5.2,3.5.3,3.5.4,3.5.6,3.5.7,3.5.8 CBI
1753363	Kimmel, C.A., 1976, Effect of Route of Administration on the Toxicity and Teratogenicity of EDTA in the Rat, Kimmel, C.A., Effect of Route of Administration on the Toxicity and Teratogenicity of EDTA in the Rat, Toxicology and Applied Pharmacology 40, 299-306 (1977)., DACO: 4.8
1753368	Swenerton, H. and L.S. Hurley, 1971, Teratogenic Effects of a Chelating Agent and their Prevention by Zinc, DACO: 4.8
1753369	Munro, I.C., 2005, Sodium Iron EDTA (WHO Food Additives Series 32), Munro, I.C., Sodium Iron EDTA, WHO Food Additives Series 32), DACO: 4.8
3002903	2019, Dry Fiesta: Acute Oral Toxicity - Up and down Procedure in Rats, DACO: 4.6.1
3002904	2019, Dry Fiesta: Acute Dermal Toxicity in Rats, DACO: 4.6.2
3002905	2019, Dry Fiesta: Acute Inhalation Toxicity in Rats, DACO: 4.6.3
3002906	2019, Dry Fiesta: Primary Eye Irritation in Rabbits, DACO: 4.6.4
3002907	2019, Dry Fiesta: Primary Skin Irritation in Rabbits, DACO: 4.6.5
3002908	2019, Dry Fiesta: Dermal Sensitization in Guinea Pigs - Buehler Method, DACO: 4.6.6
3002909	2019, Binder 2 TGAI Toxicology, DACO: 4.6,4.6.1,4.6.2,4.6.3,4.6.4,4.6.5,4.6.6,4.8
3002910	2019, Binder #3 Exposure Assessment, DACO: 4.3,4.5,4.4,5.5,5.1,5.2,5.3,5.4,5.5,5.6,5.7,5.8,5.9
3002911	W. Candela et. al., 1984, Iron Absorption by Humans and Swine from Fe(III) EDTA, DACO: 5.1,5.3
3002880	Catherine Stewart, 2019, Binder #4 Efficacy, DACO: 10.1,10.2,10.2.1,10.2.2,10.2.3, 10.2.3.1,10.2.3.2,10.3,10.3.1,10.3.2,10.3.3,10.4,10.5,10.5.1,10.5.2,10.5.3,10.5.4,10.6
3002895	Jean-Francois Briat and Michel Lebrun, 1999, Plant Responses to Metal Toxicity, Plant Biology and Pathology, 322:42-54, DACO: 10.5.4
3002896	Jorg Schonherr et. al., 2005, Rates of Cuticular Penetration of Chelated Iron (III), J. Agric. Food Chem, 53:4484-4492, DACO: 10.5.4

3002897	M.D. Englemann <i>et al.</i> , 2003, Variability of the Fenton Reaction Characteristics of the EDTA, DPTA and citrate complexes of iron, <i>BioMetals</i> , 16:519-527, DACO: 10.5.4
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B. Additional Information Considered

i) Published Information

PMRA Document Number	Reference
3367916	Whittaker, P., H. E. Seifried, R. H. C. San, J.J. Clarke and V.C. Dunkel. 2001, Genotoxicity of iron chelators in L5178Y Mouse Lymphoma Cells, <i>Environ. Mol. Mutagen.</i> 38: 347-356., doi: 10.1002/em.10033, DACO: 4.5.5
3367925	J McCann, E Choi, E Yamasaki, B N Ames, 1975, Detection of carcinogens as mutagens in Salmonella/microsome test: assay of 300 chemicals, <i>Proc Natl Acad Sci USA.</i> 72(12):5135-9., DACO: 4.5.5
3367927	European Chemicals Bureau, 2004, EU Risk Assessment Report edetic acid (EDTA). 1st Priority List., DACO: 4.5.5
3367928	EFSA, 2010, EFSA Panel on Food Additives and Nutrient Sources added to Food (ANS); Scientific Opinion on the use of ferric sodium EDTA as a source of iron added for nutritional purposes to foods for the general population (including food supplements) and to foods for particular nutritional uses, <i>EFSA Journal</i> 2010; 8(1):1414, doi: 10.2903/j.efsa.2010.1414, DACO: 4.3
3367940	Lanigan and Yamarik, 2002, Final report on the safety assessment of EDTA, calcium disodium EDTA, diammonium EDTA, dipotassium EDTA, disodium EDTA, TEA-EDTA, tetrasodium EDTA, tripotassium EDTA, trisodium EDTA, HEDTA, and trisodium HEDTA., <i>J. Tox</i> 21(2):95-142, doi: 10.1080/1091581029009652 2, DACO: 4.6.6
3367943	P. Sanchez-Pedreno, P, B. Garcia-Bravo and J. Frias-Iniesta., 2009, Contact allergy to tetrasodium EDTA in a sunscreen, <i>Contact Dermatitis</i> 2009: 61: 125-126, DACO: 4.6.6

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