

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

Application Number: 2015-6230
Application: New End-Use Product Chemistry – Guarantee, Identity of Formulants, proportion of Formulants, Formulation Type
Product: ZIDUA SC
Registration Number: 32542
Active ingredients (a.i.): Pyroxasulfone
PMRA Document Number: 2622627

Purpose of Application

The purpose of this application was to register ZIDUA SC for pre-plant, pre-emergent, and early post-emergent control of grasses, common waterhemp and redroot pigweed in field corn and soybean.

Chemistry Assessment

ZIDUA SC is formulated as a suspension containing pyroxasulfone at a nominal concentration of 500 g/L. This end-use product has a density of 1.2 g/mL and pH of 6.32. The required chemistry data for ZIDUA SC have been provided, reviewed and found to be acceptable.

Health Assessments

ZIDUA SC is of low acute toxicity via the oral, dermal and inhalation routes of exposure. It is non-irritating to the eye and slightly irritating to the skin of the rabbit. It is not a skin sensitizer in the mouse.

The occupational exposure and risk from the use of ZIDUA SC to control annual grasses and broadleaf weeds in field corn and soybeans was assessed. No health risks of concern were identified or are expected when workers follow the label directions and wear the personal protective equipment stated on the label.

The approved use directions for ZIDUA SC are similar compared to the cited precedent product. The registered use pattern can support the approved use pattern of ZIDUA SC given that the applications at the preplant/preemergence stages for field corn and soybeans and early postemergence (up to 4-leaf stage) for field corn, and that both formulations are diluted in water prior to application. Dietary exposure to residues of pyroxasulfone as a result of the use of ZIDUA SC will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

Environmental Assessment

The registration of ZIDUA SC is acceptable from an environmental perspective. Environmental concerns have been mitigated through adequate statements on the product label.

Value Assessment

Pyroxasulfone is a Group 15 herbicide from the pyrazole chemical family. All end use products containing pyroxasulfone are currently formulated as wettable granules. There are some users who prefer liquid herbicide products; therefore, the formulation of ZIDUA SC as a liquid product can provide value to those users.

The value information provided included data from 28 small plot replicated field trials, which were conducted across various ecozones in Ontario, Alberta, and Saskatchewan in 2015. The efficacy and crop tolerance of ZIDUA SC applied alone or in tank mix with listed herbicides was determined to be agronomically equivalent to the cited precedent product.

Conclusion

The Pest Management Regulatory Agency has completed an assessment of the available information and is able to support the full registration of ZIDUA SC.

References

PMRA Document Number	References
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2583314	2014, BAS 820 01 H: Group A - Product identity, composition, and analysis, DACO: 3.2.1,3.2.2,3.2.3,3.3.1,3.4.1,3.4.2 CBI
2583315	2014, GLP Validation of analytical method AFR0103/01: Determination of Pyroxasulfone (BAS 820 H) content in BAS 820 01 H formulation by reverse-phase HPLC using UV detection, DACO: 3.4.1 CBI
2583316	2014, BAS 820 01 H: Determination of physical properties and oxidation reduction, DACO: 3.5.1,3.5.2,3.5.3,3.5.6,3.5.7,3.5.8,3.5.9 CBI
2583317	2014, Accelerated storage stability report (2 weeks at 54°C) - BAS 820 01 H: Storage stability and corrosion characteristics in commercial type containers, DACO: 3.5.10,3.5.14 CBI
2583318	2014, BAS 820 01 H - Determination of physical-chemical properties according to Directive 94/37/EC (Regulation EC No. 440/2008), DACO: 3.5.11,3.5.12 CBI
2583319	2015, DACO 3.5.4_3.5.5_3.5.13_3.5.15, DACO: 3.5.13,3.5.15,3.5.4,3.5.5 CBI
2583320	2014, BAS 820 01 H - Acute oral toxicity study in rats, DACO: 4.2.1
2583321	2014, BAS 820 01 H - Acute dermal toxicity study in rats, DACO: 4.2.2
2583322	2014, BAS 820 01 H: 4-hour acute inhalation toxicity study in the rat, DACO: 4.2.3
2583323	2014, BAS 820 01 H - Acute eye irritation in rabbits, DACO: 4.2.4
2583324	2014, BAS 820 01 H - Acute dermal irritation / corrosion in rabbits, DACO: 4.2.5
2583325	2014, BAS 820 01 H - Skin sensitisation: Local lymph node assay, DACO: 4.2.6
2583326	2015, 5.2- Use Description/ Scenario (Application and Post Application)- ZIDUA SC, DACO: 5.2
2583309	2015, ZIDUA SC Value 10- Application to Register ZIDUA SC, DACO: 10.1, 10.2, 10.2.1, 10.2.2, 10.2.3, 10.2.3.1, 10.2.3.3, 10.3, 10.3.1, 10.3.2, 10.3.3, 10.4, 10.5, 10.5.1, 10.5.2, 10.5.3, and 10.5.4.

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