

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

**Application Number:** 2018-5424  
**Application:** New End-use Product (Product Chemistry) – Guarantee, Identity of Formulants, Proportion of Formulants  
**Product:** Bellacide 355  
**Registration Number:** 33608  
**Active ingredient (a.i.):** Tributyl tetradecyl phosphonium chloride  
**PMRA Document Number:** 3054952

### Purpose of Application

The purpose of this application was to register Bellacide 355, a new end-use product for the control of slime-forming bacteria and sulfate-reducing bacteria in enhanced oil recovery injection waters and fracturing fluids.

### Chemistry Assessment

Bellacide 355 is formulated as a solution containing tributyl tetradecyl phosphonium chloride at a concentration of 5.0%. This end-use product has a density of 1.0 g/mL and pH of 7.34. The required chemistry data for Bellacide 355 have been provided, reviewed and found to be acceptable.

### Health Assessments

Bellacide 355 is classified as being of moderate acute toxicity via the oral route, of low acute toxicity via the dermal route, highly toxic via the inhalation route, corrosive to eyes and skin, and not a dermal sensitizer.

The use of Bellacide 355 for the control of slime-forming bacteria and sulfate-reducing bacteria in enhanced oil recovery injection waters and fracturing fluids is not expected to result in potential occupational or bystander exposure over the registered use of tributyl tetradecyl phosphonium chloride. No risks of concern are expected when workers follow label directions and wear personal protective equipment as stated on the label.

A dietary exposure assessment was not required for this application.

### Environmental Assessment

The registration of Bellacide 355 is supported from an environmental perspective. The required environmental risk reduction and hazard statements are included on the product label.

## **Value Assessment**

One laboratory study was provided to support the value of Bellacide 355 as an industrial slimicide for use in the oil and gas production industry. The study demonstrated that the product was effective in controlling representative microbial contaminant species within fluids representative of oilfield uses, such as water floods and fracturing fluids, when used at the label rates. Therefore, Bellacide 355 has been shown to have acceptable value as an industrial slimicide for these purposes.

## **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 Bellacide 355.

## References

<b>PMRA Document Number</b>	<b>Reference</b>
2928695	2018, Formulation Process, DACO: 3.2.1, 3.2.2, 3.2.3 CBI
2928697	2018, Enforcement Analytical Method, DACO: 3.4.1 CBI
2928698	2004, Bellacide 355: Product Chemistry, Series 63, DACO: 3.5.1, 3.5.2, 3.5.3 CBI
2928699	2018, Chemical and Physical Properties, DACO: 3.5.11, 3.5.12, 3.5.13, 3.5.15, 3.5.4, 3.5.5, 3.5.8 CBI
2928700	2004, Chemical and Physical Properties Evaluation of Bellacide 355, DACO: 3.5.6, 3.5.7, 3.5.9 CBI
2928701	2005, 30-Day Accelerated Stability Evaluation of Bellacide 355, DACO: 3.5.10, 3.5.14 CBI
2447976	2014, Value Summaries, DACO: 10.1, 10.2.2, 10.2.3.1, 10.3.1, 10.3.2
2447978	2000, Bellacide 350 Product Information, DACO: 10.2.1
2928715	2016, Biocidal Efficacy of Bellacide 355 Under Oilfield Conditions, DACO: 10.2.3.1, 10.2.3.3

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