Health Canada Santé Canada

Evaluation Report for Category B, Subcategory 2.1 Application

Application Number: 2017-1030
Application: B.2.1:
Product: Dive Smart Sanitizer G1
Registration Number: 32799
Active ingredients (a.i.): Copper
PMRA Document Number : 2782309

Purpose of Application

The purpose of this application was to register a swimming pool device, Dive Smart Sanitizer G1, which combines two well-known processes: salt chlorine generation and copper ionization. The chlorine/copper device is powered using a hydro turbine converting the energy of moving water in the pool plumbing to electricity.

Health Assessments

There are numerous electrolytic chlorine generators and copper ion generators registered in Canada with a long history of use for controlling algae and bacteria in residential pools. The Dive Smart Sanitizer G1 combines these two technologies into one device.

The recommended concentrations of free chlorine to be generated by the device correspond to the Health Canada recommended free chlorine concentrations for residential pools. The concentration of salt to be added to the pool water as a precursor for the electrolytic process is within the range of salt concentrations recommended for other similar registered devices. The recommended copper ion concentrations to be generated by the device are also within the range of concentrations generated by other similar registered devices and are less than Canadian and international drinking water guidelines and standards for copper. Finally, the values for pool chemistry parameters (i.e., pH, total alkalinity, calcium hardness, and cyanuric acid levels) recommended in the installation and operation manual for the Dive Smart Sanitizer G1 correspond to the values recommended by Health Canada for residential pools.

No exposure to pool water treated by the device is expected during installation of the device. Dermal and accidental ocular exposure to treated pool water is possible during normal operation and maintenance, particularly when sampling for pool chemistry parameters, but is anticipated to be minimal. Although extensive dermal exposure, ocular exposure, and accidental oral ingestion of small amounts of pool water can occur for recreational pool users (i.e., bathers), free chlorine and other pool chemistry parameters are to be maintained at Health Canada recommended levels, copper concentrations are less than drinking water guidelines and standards and within the range of other registered copper ion generators, and any metals or metal oxides released from the electrodes in the device are anticipated to only be present in trace amounts in the pool water. Consequently, potential exposures and risks from pool water treated by the device are not anticipated to be of concern.

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Chemistry and Environmental Assessment

Chemistry and environmental assessments were not required for this application.

Value Assessment

Value information was submitted to confirm that the free available chlorine (FAC) generated per day is sufficient, based on the maximum pool volumes stated on the label, for each type of swimming pool pump, to provide FAC residuals within the recommended 1-3 ppm range for pools. Value information was also provided to demonstrate that the Dive Smart Sanitizer G1 is able to attain 0.2 ppm copper output. Therefore, the use of Dive Smart Sanitizer G1 in domestic swimming pools for the control of bacteria and algae was found to have acceptable value.

Conclusion

The PMRA has reviewed the information provided in support of this application. Based on the results of this review, Dive Smart Santizer G1 is acceptable for registration.

References

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2768571	USEPA, 2017b, Secondary Drinking Water Standards for Nuisance Chemicals, https://www.epa.gov/dwstandardsregulations/secondary-drinking-water-standards-guidance-nuisance-chemicals#table, DACO: 12.5.4
2768574	WHO, 2011, Guidelines for Drinking-Water Quality, Chemical Fact Sheets, Chapter 12, http://apps.who.int/iris/bitstream/10665/44584/1/9789241548151_eng.pdf , DACO: 12.5.4
2734234	2017, Use Description, DACO: 5.2
2757815	2017, Response to PMRA Clarification, DACO: 5.2
2734235	2017, Chlorine, Free DPD Method, Method 10069, DACO: 10.2
2734236	2017, Chlorine Output Report Dive Smart SanitizerTM G1, DACO: 10.2.3.2(F)
2734237	2017, Copper Output Report Dive Smart SanitizerTM G1, DACO: 10.2.3.2(F)
2734230	2017, Fire and Explosion Warning Waiver Request, DACO 1.1.1
2734238	2017, UL Certification, DACO: 10.6

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