

Evaluation Report for Category B, Subcategory 2.1 Application

Application Number: 2020-1429
Application: New / Changes End-use Product (Product Chemistry) - Guarantee
Product: Dyson Purifier Humidify + Cool
Registration Number: 34316
Active ingredients (a.i.): Device, using ultraviolet C (wavelength 280-100 nm) light
PMRA Document Number : 3283716

Purpose of Application

The purpose of this application is to register a new device, Dyson Purifier Humidify + Cool, containing a humidifier which uses ultraviolet C (UVC) light to sanitize the humidifier water to reduce bacterial levels by 99.9%.

Health Assessments

Health concerns from potential exposure to UVC light include effects on the eyes and skin. The main acute skin lesion from exposure to ultraviolet radiation (UVR) is erythema or sunburn. Erythema can be induced by ultraviolet light (including UVC) and the wavelength of light, skin type, and skin pigmentation all influence whether it will occur. Other acute skin responses to ultraviolet light include tanning and photosensitivity. The most important cellular target for UVR is DNA, which has an absorption peak in the UVC spectrum at 260 nm. It is generally accepted that UVC radiation is a cause of carcinogenicity in mammals.

The risks to bystanders and residential users are acceptable when Dyson Purifier Humidify + Cool is used according to label directions. Precautionary and direction for use statements on the product label, as well as the design of the device (i.e., the source of UVC light is fully shielded and switches off as soon as the pump column assembly, which houses the light, is removed), aimed at mitigating residential exposure are considered adequate to protect individuals from any potential risk due to exposure.

There is no potential for occupational exposure since the product is for domestic use.

Value Assessment

Dyson Purifier Humidify + Cool contains a humidifier which uses an UVC light to sanitize the humidifier water and reduce bacterial levels by 99.9%. The use of an UVC light within a humidifier, such as Dyson Purifier Humidify + Cool, is capable of reducing the bacterial population in the water by 99.9% prior to misting. This would reduce the need for general maintenance of the humidifier by continuously controlling the growth of bacteria in the water and preventing the development of biofilm over time on the internal surfaces of the device.

Chemistry and Environmental Assessment

Chemistry and environmental assessments were not required for this application.

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 Dyson Purifier Humidify + Cool.

References

PMRA Document Number	Reference
3148301	2020, Mode of Action and Description of the Product, DACO: 10.2.1
3148302	2020, Description of the Pest Problem, DACO: 10.2.2
3217445	2020, Response to deficiency letter, DACO: 10.2.3
3148304	2020, Aerobiological Testing of a Domestic Humidifier Unit - Dyson X358-OR1, DACO: 10.2.3.2
3148305	2020, Microbiological Testing of a Domestic Humidifier Unit - Dyson X358-OR1, DACO: 10.2.3.2
3148306	2020, Non-Safety Adverse Effects, DACO: 10.3.2
3148307	2020, Listing Constructional Data Report, DACO: 10.6
3217434	2020, Use Description/Scenario (Application and Post Application), DACO: 5.2
3217435	2020, Use Description/Scenario (Application and Post Application), DACO: 5.2
3217428	2020, Use Description/Scenario (Application and Post Application), DACO: 5.2

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