

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

Application Number: 2012-2301
Application: New end-use product chemistry – Guarantee, proportion and identify of formulants and formulation type
Product: J.P. Textile Earth’s DE Killer - Industrial
Registration Number: 30966
Active ingredients (a.i.): Silicon dioxide (present as diatomaceous earth)
PMRA Document Number : 2227442

Purpose of Application

The purpose of this application was to register a new commercial end-use product, J.P. Textile Earth’s DE Killer - Industrial (6.56 % w/w silicon dioxide present as 8 % diatomaceous earth), for indoor use on bed bugs. J.P. Textile Earth’s DE Killer - Industrial is to be applied as an aerosol with a pressurized spray can.

Silicon dioxide has undergone re-evaluation by the PMRA with results and mandatory label statements listed in PACR2004-09 - *Re-evaluation of Silicon Dioxide and Silica Gel*, and RRD2004-20 - *Silicon Dioxide and Silica Gel*.

Chemistry Assessment

J.P. Textile Earth’s DE Killer – Industrial is formulated as a pressurized product containing silicon dioxide (present as diatomaceous earth) at a nominal concentration of 6.56%. This end-use product has a specific gravity of 0.69. The chemistry requirements for J.P. Textile Earth’s DE Killer – Industrial are complete.

Health Assessments

Available information suggests that J.P. Textile Earth’s DE Killer - Industrial will be of low acute oral, dermal, and inhalation toxicity, will be minimally irritating to the eye, but not to the skin, and is not expected to be a dermal sensitizer. The label advises against contact with the eyes as a mitigative measure.

A List 2 formulant, containing a substance of toxicological concern, is present in J.P. Textile Earth’s DE Killer – Industrial, but at concentrations considered acceptable by the Health Canada Cosmetic Ingredient Hotlist (March 2011). Mitigative label statements advising against inhalation will be sufficient to permit the use of the list 2 formulant in J.P. Textile Earth’s DE Killer – Industrial.

Occupational exposure associated with J.P. Textile Earth’s DE Killer - Industrial is characterized

as short-term and intermediate in duration and is most likely to occur during application and clean-up of the treated area(s). Occupational exposure will be limited with the use of appropriate personal protective equipment, hygiene, and ventilation statements on the label.

To ensure that bystander exposure is minimized, when J.P. Textile Earth's DE Killer - Industrial is applied in homes, motels, hotels, and non-food areas of hospitals, people and/or pets should not be in the immediate vicinity. When applying J.P. Textile Earth's DE Killer – Industrial in an institution, occupants should be removed from the area to be treated prior to application.

Since April 26, 2007, registrants have been required by law to report incidents, including adverse effects to health and the environment, to the PMRA. Information on the reporting of incidents can be found on the PMRA website. Incidents were searched and reviewed for the active ingredient silicon dioxide (present as 100% diatomaceous earth) – fresh water fossils. As of February 11, 2013, the PMRA had received four human and ten domestic animal incident reports associated with this active ingredient. All incidents were either minor or moderate in severity and occurred in Canada. All incidents involved domestic class products that are formulated as a dust.

There was a good association between the reported human exposures to silicon dioxide (present as 100% diatomaceous earth) – fresh water fossils and their respiratory symptoms. From the information available regarding the domestic class animal incident reports, there was determined to be little association between the reported effects and exposure.

There were no incidents in the California reporting system, and the EPA has not published any evaluations of incidents relating to silicon dioxide (present as 100 % diatomaceous earth) derived from fresh water fossils.

These incident reports were considered in this evaluation and did not affect the risk assessment.

Environmental Assessment

An environmental assessment was not required for this application.

Value Assessment

Efficacy data from two experiments, conducted in a laboratory setting, demonstrated the effectiveness of J.P. Textile Earth's DE Killer, an aerosol formulation. The submitted value information supported the registration of the end-use product J.P. Textile Earth's Killer DE - Industrial for the control of bed bugs.

Conclusion

The PMRA has completed an assessment of available information for J.P. Textile Earth's DE Killer - Industrial and has found the information sufficient to support full registration.

References

PMRA Document Number	Reference
2202332	2012, Toxicity of different types of diatomaceous earth against the common bed bug, <i>Cimex lectularius</i> in the laboratory, DACO: 10.2.3.2(D)
2202333	Part 3 JP Textile Aero. Com. June.12, 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 CBI
2243698	Part 3 JP Textile Aero. Com., DACO: 3.4.1 CBI
2243699	E. A. M. Letter to JP Textile., DACO: 3.4.1 CBI

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