

Summary of Risk Assessment Conducted Pursuant to subsection 83(1) of the *Canadian Environmental Protection Act, 1999*

New Substances Notification 20451: Carbomonocycle alcohol, 2,2'-[(4-methoxyphenyl)heteromonocyclediyl]bis[5-[(2-ethylalkyl)oxy]- (Confidential Accession No. 19518-6)

Regulatory decisions

Under the provisions for Substances and Activities New to Canada in Part 5 of the *Canadian Environmental Protection Act, 1999* (CEPA), and pursuant to section 83 of the Act, the Minister of the Environment and the Minister of Health have assessed information in respect of the substance and have determined that it is not anticipated to enter the environment in a quantity or concentration or under conditions that have or may have an immediate or long term harmful effect on the environment or its biological diversity, constitute or may constitute a danger to the environment on which life depends, or constitute or may constitute a danger in Canada to human life or health.

Substance identity

The notified chemical is carbomonocycle alcohol, 2,2'-[(4-methoxyphenyl)heteromonocyclediyl]bis[5-[(2-ethylalkyl)oxy]- (Confidential Accession No. 19518-6).

Notified and potential uses

The substance is proposed to be imported into Canada in quantities greater than 10 000 kg/yr for the notified use as an ultraviolet (UV) light absorber in sunscreen products for cosmetic (specifically, facial creams with sun protection) and personal care (specifically, traditional sunscreens) applications. No other uses are anticipated in Canada.

Environmental fate and behaviour

Based on its physical and chemical properties, if the substance is released to the environment, it will tend to partition to soil and sediment. The substance is expected to be persistent in these compartments based on negligible biodegradation, negligible volatility, moderate or higher octanol-water partitioning coefficient, and very high soil adsorption coefficient values. The substance is not expected to bioaccumulate based on low predicted and experimental bioconcentration factors.

Environmental risk assessment

Based on the available hazard information, the substance induced no adverse effects in fish, aquatic invertebrates, and algae exposed to saturated solutions. A predicted no-effect concentration was not calculated given the low potential for ecological hazard.

The notified and other potential activities in Canada were assessed to estimate the environmental exposure potential of the substance throughout its life cycle. Environmental exposure from the notified activities is expected to be mainly from use and disposal by release of the substance to water at low rates. A predicted environmental concentration was not calculated due to the low potential for ecotoxicity. No potential activities that could significantly increase environmental risks compared to those notified were identified.

Based on the low potential for ecotoxicity, the substance is unlikely to cause ecological harm in Canada.

Human health assessment

Based on the available hazard information, the substance has a low acute toxicity by the oral and dermal routes (median lethal dose >2000 mg/kg body weight) and low subchronic toxicity following repeated oral doses in mammalian test animals (90-day no-observed-adverse-effect level >100 mg/kg-bw/day). It is not a dermal sensitizer (0-8% response (guinea pig maximization test)). It is not mutagenic *in vitro* and is not clastogenic *in vitro* or *in vivo*. Therefore, the substance is unlikely to cause genetic damage.

When the notified substance is used as a UV light absorber in sunscreen products for cosmetic and personal care applications, direct exposure of the general population is expected to be mainly by contact with the skin. This use is assessed by the Health Products and Food Branch of Health Canada. Indirect exposure of the general population from environmental media such as drinking water is expected to be at low levels given the low potential for environmental release. No potential uses that could significantly increase human health risks compared to the notified uses were identified.

Based on the low toxicity, the substance is not likely to pose a significant health risk to the general population, and is therefore unlikely to be harmful to human health.

Assessment conclusion

When the substance is used as notified, it is not expected to be harmful to human health or the environment according to the criteria under section 64 of the Act.

A conclusion under CEPA, on this substance, is not relevant to, nor does it preclude an assessment against the hazard criteria for Workplace Hazardous Materials Information System that are specified in the *Controlled Products Regulations* or *Hazardous Products Regulations* for products intended for the workplace.