

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

New Substances Notification No. 18851: 2-Propenoic acid, alkylalkyl ester, reaction products with 2-phenoxyalkanol- and polypropylene glycol mono-alkyl ether-blocked alkylenetriamine-1,6-diisocyanatohexane-alkyleneimine-2-oxepanone-tetrahydro-2H-pyran-2-one polymer ester with polyalkylene glycol mono-alkyl ether

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 polymer is 2-propenoic acid, alkylalkyl ester, reaction products with 2-phenoxyalkanol- and polypropylene glycol mono-alkyl ether-blocked alkylenetriamine-1,6-diisocyanatohexane-alkyleneimine-2-oxepanone-tetrahydro-2H-pyran-2-one polymer ester with polyalkylene glycol mono-alkyl ether (Confidential Accession No. 19175-3). The substance does not meet the Reduced Regulatory Requirements criteria according to the *New Substances Notification Regulations (Chemicals and Polymers)* because it contains potentially cationic amine groups.

Notified and Potential Activities

The substance is proposed to be manufactured in and/or imported into Canada in quantities greater than 10 000 kg/yr for use as a wetting and dispersive additive for industrial applications. No other activities are anticipated in Canada.

Environmental Fate and Behaviour

Based on its physical and chemical properties, if released to the environment, the substance will tend to partition to soil and sediment. The substance is expected to be persistent in soil and sediment it does not contain any functional groups that are susceptible to degradation. The substance is not expected to bioaccumulate based on its high molecular weight which will limit its ability to cross biological membranes.

Ecological Assessment

Based on the available hazard information, the substance has low acute toxicity in algae (median effective loading rate >100mg/L). A predicted no-effect concentration was not calculated given the low potential for ecological hazard.

The notified 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 low. The substance will be consumed and reacted into a polymer matrix, and it will be unavailable for release. A predicted environmental concentration was not calculated due to the low potential for ecotoxicity. No other activities 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 potential for acute toxicity by the oral route of exposure (median lethal dose >2000 mg/kg body weight).

When the notified substance is used as a wetting and dispersive additive for industrial applications, direct exposure of the general population is expected to be low. Indirect exposure of the general population from environmental media such as drinking water is expected to be low. No other uses were identified.

Based on the low potential for exposure and 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 used as notified, the substance is not suspected to be harmful to human health or the environment according to the criteria under section 64 of CEPA.

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.