

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

New Substances Notification No. 17976: Poly[oxy(alkyl-alkanediyl)], α -hydro- ω -hydroxy-, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 2-hydroxyethyl methacrylate-blocked

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 that 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

Poly[oxy(alkyl-alkanediyl)], α -hydro- ω -hydroxy-, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 2-hydroxyethyl methacrylate-blocked (Confidential Accession No. 18881-8) is a polymer that can be classified as a poly(cycloalkylurethane,[ether]). The substance does not meet the Reduced Regulatory Requirements criteria because of presence of pendant acrylate endgroups.

Notified and Potential Activities

The substance is proposed to be imported into Canada in quantities greater than 10 000 kg/yr for use as a coating resin on a variety of substrates. Other potential uses are expected to be similar to those notified.

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 sediments. The substance is expected to be persistent in these compartments based on the chemical composition, size and structure of the substance making it resistant to abiotic and biotic breakdown processes. The substance is not expected to bioaccumulate based on its high molecular weight making it unable to cross biological membranes.

Ecological Assessment

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

No significant environmental releases are expected from the notified use of the substance given that it is not manufactured in Canada, and given the low potential hazard associated with the substance; calculation of a predicted environmental concentration was not required.

Based on the low potential for ecological hazard and negligible releases from the notified use of the substance, the substance is unlikely to cause ecological harm in Canada.

Human Health Assessment

Based on the available hazard information on the substance, the substance has a low (median lethal dose >2000 mg/kg-bw) potential for acute toxicity by the oral route of exposure.

When the notified substance is used as a coating resin on a variety of substrates, direct exposure of the general population is not expected given that the substance will be bound into the matrix and is not expected to be readily released. Indirect exposure of the general population from environmental media such as drinking water is not expected.

Based on the low likelihood of exposure in conjunction with the low acute oral toxicity in rats, 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 the *Hazardous Products Regulations* for products intended for workplace use.