

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

New Substances Notification 20255: Substituted carbomonocycle, carbomonocycle, reaction products with polyalkylalkene, homopolymers (Confidential Accession Number 19472-0)

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 substituted carbomonocycle, carbomonocycle, reaction products with polyalkylalkene, homopolymers (Confidential Accession No. 19472-0). The substance was assessed as a non-Reduced Regulatory Requirement polymer.

Notified and potential uses

The substance is proposed to be imported into Canada in quantities greater than 10 000 kg/yr for notified use in lubricants and polyurethane foams. Potential uses may include usage in paints, coatings, adhesives, rubber and plastic products.

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 soils and sediments. The substance is expected to be persistent in soil and sediment based on low biodegradability (10-30% over 28 days) and because of the lack of environmentally hydrolysable groups. Some lower molecular weight components of the substance may have bioaccumulation potential based on their moderate octanol-water partition coefficient ($\log K_{ow}$ 3-6).

Ecological assessment

Based on the available hazard information, the substance is not expected to have adverse effects on fish, aquatic invertebrates, and algae. 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 mainly from processing and use, and wastewater removal is expected to be efficient. A predicted environmental concentration was not calculated due to the low potential for environmental exposure and ecotoxicity.

Based on the low potential for ecotoxicity and environmental exposure, 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 route (median lethal dose >2000 mg/kg body weight). The substance does not contain structural features associated with adverse human health effects.

When the notified substance is used in industrial and commercial lubricant and polyurethane foam applications, direct exposure of the general population is not expected due to the industrial and commercial nature of the use. Indirect exposure of the general population from environmental media such as drinking water or air is expected to be at low levels given the low potential for environmental release. Potential uses of the substance include use in consumer paints, coatings and adhesives, where direct and indirect exposure of the general population is expected to be at levels that do not pose a concern, similar to that of the notified use.

Based on the low potential for exposure and the absence of structural features associated with adverse human health effects and, 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

The substance 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.