

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

New Substances Notification 20197: Alcohols, C₉₋₁₁-branched, ethoxylated propoxylated (Chemical Abstracts Service registry number 1400790-00-2)

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 alcohols, C₉₋₁₁-branched, ethoxylated propoxylated (Chemical Abstracts Service registry number¹ 1400790-00-2). The substance does not meet the Reduced Regulatory Requirements criteria according to the *New Substances Notification Regulations (Chemicals and Polymers)* because its number average molecular weight is less than 1000 daltons.

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 additive in paints and coatings. Potential uses may include textiles, pulp and paper, inks and adhesives, cleaners and personal care 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 water. The substance is not expected to be persistent in that compartment based on its ready biodegradation. The substance is not expected to bioaccumulate because it will rapidly be metabolized and eliminated.

Ecological assessment

Based on the available hazard information, the substance is expected to have moderate acute toxicity to fish and aquatic invertebrates (median lethal concentration (LC₅₀) and median effective concentration 1-100 mg/L) and moderate chronic toxicity to algae (no-observed-effect-concentration 0.1-10 mg/L). Using the LC₅₀ from the most sensitive organism (fish) and by applying appropriate assessment factor of 100 to account for endpoint standardization, species sensitivity variation and mode of action, the

¹ The Chemical Abstracts Service registry number is the property of the American Chemical Society and any use or redistribution, except as required in supporting regulatory requirements and/or for reports to the Government of Canada when the information and the reports are required by law or administrative policy, is not permitted without the prior, written permission of the American Chemical Society.

predicted no-effect concentration (PNEC) was calculated to be in the range of 10-100 µg/L, which was used to estimate the ecological risk.

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 transportation by release of the substance to water resulting in a predicted environmental concentration (PEC) in the range of 1-10 µg/L, and from formulation and use in paints and coatings by release of the substance to water resulting in a PEC in the range of 0.1-1 µg/L. For potential activities such as manufacturing, environmental exposure is expected to be mainly by release of the substance to water resulting in a PEC in the range of 1-10 µg/L.

Comparing the PEC with the PNEC, the ratio is less than 1. This, along with other lines of evidence including environmental fate, hazard, and exposure, indicates that 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).

When the notified substance is used as an additive in industrial or commercial paints and coatings, consumers may come into contact with end-use products containing the substance; however, direct exposure is not expected because the substance will be chemically reacted into a stable matrix once the product is cured, and thus it will be unavailable for uptake. When the notified substance is used as an additive in consumer paints and coatings, direct exposure of the general population is expected to be at levels that do not pose a concern. Indirect exposure of the general population from environmental media such as air and drinking water is expected to be at low levels given the low potential for release to air and biodegradation in the aquatic environment. Potential uses of the substance include personal care products and household detergents, where direct and indirect exposure of the general population is expected to be at levels that do not pose a concern.

Based on low mammalian toxicity, and considering other available lines of evidence, 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 or for other identified potential activities, 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.