

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

New Substances Notification 19912: Polyphenol, alkali, polymers with acetone-phenol reaction products, formaldehyde and phenol, potassium salts (Confidential Accession Number 19426-4)

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 polyphenol, alkali, polymers with acetone-phenol reaction products, formaldehyde and phenol, potassium salts (Confidential Accession No. 19426-4). The polymer does not meet the Reduced Regulatory Requirements criteria according to the *New Substances Notification Regulations (Chemicals and Polymers)* because it contains unsubstituted positions ortho or para to phenolic hydroxyl.

Notified and potential uses

The substance is proposed to be manufactured in and imported into Canada in quantities greater than 10 000 kg/yr for the notified use as industrial adhesives. 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 water. The substance is expected to be persistent in this compartment because it does not contain any functional groups that are susceptible to hydrolysis or biodegradation. The substance is not expected to bioaccumulate based on its low expected octanol-water partition coefficient ($\log K_{ow} < 3$).

Ecological assessment

Based on the available hazard information, the substance is expected to have low acute toxicity to algae (median effective concentration > 100 mg/L) and low chronic toxicity to algae (lowest-observed-effect-concentration > 10 mg/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 substances throughout its life cycle. Environmental exposure from the notified activity is expected to be minimal. A predicted environmental concentration was not calculated due to the low potential for

environmental exposure and low ecotoxicity. No potential activities that could significantly increase environmental risks compared to those notified were identified.

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 is expected to have a low acute toxicity by the oral route (median lethal dose > 2000 mg/kg body weight). The substance contains unsubstituted positions ortho or para to phenolic hydroxyls, which are of concern for potential sensitization and systemic toxicity.

When the notified substance is used as industrial adhesives, 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 will be unavailable for uptake. Indirect exposure of the general population from environmental media such as drinking water is not expected given the low potential for environmental release. No potential uses which could significantly increase human health risks compared to the notified use were identified.

Based on the low toxicity and low potential for exposure, 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.