

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

New Substances Notification 21367: 1,3,5-Triazine-2,4,6-triamine, *N*²,*N*^{2'}-1,6-hexanediylbis[*N*⁴,*N*⁶-dibutyl-*N*²,*N*⁴,*N*⁶-tris(2,2,6,6-tetramethyl-4-piperidiny)-, *N*-allyl derivs., oxidized, hydrogenated (Chemical Abstracts Service Registry Number 1902936-62-2)

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 chemical is 1,3,5-triazine-2,4,6-triamine, *N*²,*N*^{2'}-1,6-hexanediylbis[*N*⁴,*N*⁶-dibutyl-*N*²,*N*⁴,*N*⁶-tris(2,2,6,6-tetramethyl-4-piperidiny)-, *N*-allyl derivs., oxidized, hydrogenated (Chemical Abstracts Service Registry Number¹ 1902936-62-2), and is considered a substance of Unknown or Variable composition, Complex reaction products or Biological materials (UVCB).

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 in plastic film for industrial applications. Potential uses may include use in rubber tires and hoses and polyethylene products for telecommunications applications.

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 soil and sediment. The substance is expected to be persistent in these compartments based on its low biodegradation potential ($\leq 10\%$ over 28 days). The substance is not expected to bioaccumulate based on its low bioavailability.

Environmental risk assessment

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Based on the available hazard information, the substance has a low acute toxicity to fish (median lethal loading rate > 100 mg/L) and low chronic toxicity in aquatic invertebrates (lowest-observed-effect loading rate > 10 mg/L), and is expected to have a low acute toxicity in aquatic invertebrates (median effective loading rate > 100 mg/L) and low chronic toxicity in algae (no-observed-effect level > 10 mg/L). A predicted no-effect concentration was not calculated given the low potential for hazard to the environment.

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 release of the substance to water at low rates. For potential activities such as manufacturing and other industrial uses, environmental exposure is expected to be quantitatively similar to that of the notified use. A predicted environmental concentration was not calculated due to the low potential for environmental exposure and low ecotoxicity.

Based on the low potential for ecotoxicity and low environmental exposure, the substance is unlikely to cause harm to the environment in Canada.

Human health risk assessment

Based on the available hazard information, the substance has a low acute toxicity by the dermal route (median lethal dose (LD₅₀) > 2000 mg/kg body weight) and is expected to have low acute toxicity by the oral route (LD₅₀ > 2000 mg/kg-bw). It has low subchronic toxicity following repeated oral doses in mammalian test animals (28-day no-observed-adverse-effect level (NOAEL) > 300 mg/kg-bw/day). The substance has a low reproductive/developmental toxicity following repeated oral doses in mammalian test animals (NOAEL > 300 mg/kg-bw/day). It is expected to be a moderate dermal sensitizer (estimated concentration required to produce a stimulation index of 3 is 1-10% in a local lymph node assay). It is not mutagenic or clastogenic *in vitro*. Therefore, the substance is unlikely to cause genetic damage.

When the notified substance is used in plastic film for industrial applications, direct exposure of the general population is not expected because the substance is reacted to make a final product from which it is not anticipated to be released. Indirect exposure of the general population from environmental media is not expected given the specialized industrial use of the substance, which results in little or no release to the environment. Potential uses of the substance include in rubber tires and hoses, and in polyethylene products such as telecommunications cables, 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, 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.

The assumptions made in the assessment are considered to be adequately protective for the general population as well as for subpopulations who may be more susceptible or highly exposed.

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 the *Hazardous Products Regulations* for products intended for the workplace.