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

New Substances Notification 19987: 1-Propanamine, 3-(triethoxysilyl)-*N*-[3-(triethoxysilyl)propyl]- (Chemical Abstracts Service Registry Number 13497-18-2)

**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-propanamine, 3-(triethoxysilyl)-*N*-[3-(triethoxysilyl)propyl]- (Chemical Abstracts Service Registry Number[1] 13497-18-2)

**Notified and potential uses**

The substance is proposed to be imported into Canada in quantities greater than 10 000 kg/yr to be used in industrial adhesives and sealants and as surface modifier. Potential uses may include consumer adhesives, sealants and coatings.

**Environmental fate and behaviour**

Based on its physical and chemical properties, if released to the environment, the substance will tend to partition to water. The substance is not expected to be persistent based on its very short hydrolysis half-life (≤10 days) in water. However, one of the environmental products of hydrolysis is expected to be persistent in water. The substance and its products of hydrolysis are not expected to bioaccumulate based on low to moderate octanol-water partitioning coefficients (log $K_{ow}$ <5).

**Ecological assessment**

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

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The notified activities in Canada were assessed to estimate the environmental exposure potential of the substance throughout its life cycle. Environmental releases resulting from the notified activity is expected to be minimal as the substance will be chemically consumed during its use and any residual waste is expected to be incinerated. A predicted environmental concentration was not calculated due to the low potential for environmental exposure and ecotoxicity. No potential activities which could significantly increase environmental risks compared to those notified were identified.

Based on the low potential for ecotoxicity and low 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 and dermal routes (median lethal dose > 2000 mg/kg body weight). It is not expected to be mutagenic *in vitro*. Therefore, the substance is unlikely to cause genetic damage.

When the notified substance is used in industrial adhesives and sealants and as a surface modifier, direct exposure of the general population is not expected due to the industrial nature of the use. 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 cured and will be unavailable for uptake. 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 consumer adhesives, sealants and coatings, where direct exposure of the general population is expected to be at low levels given the low concentration in end-use products and the rapid curing of the substance when exposed to moisture in the air.

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 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.