



NICNAS Existing Chemicals Information Sheet

Triclosan

September 2011

Triclosan is a chemical included in many consumer products at very low concentrations due to its antimicrobial activity. Triclosan is also used in the treatment of textiles and in plastics manufacture. It is imported into Australia as a raw chemical and as an ingredient in a large number of consumer products. It is used to formulate cosmetics and personal care products, therapeutic products and cleaning agents.

Triclosan was declared a Priority Existing Chemical (PEC) for full risk assessment due to environmental concerns. The NICNAS report is the first full risk assessment (covering occupational health and safety, public health and environmental risks) by any regulatory agency in the world. Recommendations for the safe use of triclosan are included in the PEC report (available at [NICNAS](#)).

The assessment was conducted as widespread use of triclosan provides a number of ways for the chemical to enter the environment. In addition, tests showed triclosan to be toxic to aquatic species including algae. The chemical properties of triclosan indicated that it may be bioaccumulative and persistent in the environment.

Findings

Public health

The assessment found no concern for the public in general, however in a subgroup of the population that uses several triclosan-containing products simultaneously, there may be concern and regulatory controls are recommended for maximum concentrations in cosmetics and personal care products. Triclosan was detected in breast milk samples from Australian mothers at extremely low levels (less than one part per billion in most samples). There is no evidence of any potential harm to breastfed babies from the amount of triclosan detected in breast milk, and breastfeeding is recommended in accordance with Australian Dietary Guidelines. The NICNAS assessment did not find convincing evidence that triclosan poses a risk to humans by inducing or transmitting antibacterial resistance.

Occupational health

Breathing in large quantities of dust generated during occupational use of triclosan powder can cause health effects in workers. Triclosan powder can also cause skin and eye irritation. Workplace practices such as engineering controls and use of personal protective equipment reduce these effects.

Environment

Measured levels of triclosan in Australia are at the lower end of the international observed values for sewage effluent, biosolids and surface water. If these limited screening study values are representative of Australian levels, then the risk does not warrant regulatory action at this stage. However, there is uncertainty that these values are characteristic of the full range of Australian situations. NICNAS recommends sampling studies be conducted to validate environmental assumptions.

Recommendations

The report contains three main recommendations:

1. Revised OHS and transport classifications: to be amended in Hazardous Substances Information System ([HSIS](#)) and suppliers and employers to note revised hazard classification and codes for transporting dangerous goods by road and rail, and amend Material Safety Data Sheets and labels.
2. Poison scheduling for public health: scheduling triclosan under the Standard for the Uniform Scheduling of Medicines and Poisons ([SUSMP](#)) with a cut-off for cosmetics and personal care products.

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3. Environmental monitoring: conduct targeted sampling studies of triclosan levels in releases from sewage treatment plants and receiving fresh waters and in biosolids used as a soil conditioner.

Current status

1. The hazard classification of triclosan in SafeWork Australia's HSIS was revised and now includes the following risk phrases: "Toxic (T)"; "Irritant (Xi)"; "Dangerous for the environment (N)"; "Toxic by inhalation (R23)"; "Irritating to eyes, respiratory system and skin (R36/37/38)"; "Very toxic to aquatic organisms (R50)"; and "May cause long-term adverse effects in the aquatic environment (R53)".
2. Triclosan will be listed in the SUSMP in Schedule 6 when used in cosmetic preparations for human use at more than 0.3 per cent effective 1 May 2012. Schedule 6 listing requires the signal word – 'Poison' and reduces the extent of harm through the use of distinctive packaging with strong warnings and safety directions on the label.
3. The report: *Short-term sampling of Triclosan in wastewater, biosolids and the receiving freshwater and sediment environment* presents the final outcomes from the Recommendations (7 and 8a) in the Triclosan PEC report.

The extent of release of triclosan from sewage treatment plants has been determined and, where possible, the triclosan levels and potential impacts on the different environmental compartments are discussed. The risk characterisation based on the triclosan concentrations detected in the wastewaters, surface waters and biosolids confirms the risk in the Triclosan PEC report for aquatic and the terrestrial ecosystems.

The report is expected to be available in the near future.

For more information

Contact NICNAS by phone 1800 638 528 or email info@nicnas.gov.au.