

To CYNDAN CHEMICALS  
1/7 Jubilee Ave, Warriewood  
NSW 2012 AUSTRALIA

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## **LIQUIDZYMES EXPLANATORY STATEMENT**

### **Background**

Cyndan *Liquidzymes* is designed for treatment of waste water to reduce odour and enhance biodegradation. The product has been developed to be as safe to users and the environment as practicable and to have a positive environmental benefit when used in accordance with their Directions for Use.

The Materials Safety Data Sheet (MSDS) issued for each product contains statements that these products are hazardous to the aquatic environment which appears to contradict the intended use of the product. However, the environmental statements contained in the MSDS relate only to the concentrate and not to the properties of the product when used in accordance with the Directions for Use.

This Explanatory Statement is intended to make it clear that the purpose of the MSDS is to advise people in the "supply chain" who are handling and transporting the full concentrated products of their properties and potential risks in the event of accidental contact or spill including release to the environment.

### **Materials Safety Data Sheet**

The purpose of the Materials Safety Data Sheet (MSDS) is to provide information for persons handling the concentrated products of the risks to health and the environment in the event of accidental release or contact with the material. In particular, the MSDS must address first aid measures in the event of accidental eye or skin contact or accidental ingestion or inhalation, if applicable. In addition, the MSDS provides key information on what action to take in the event of fire, accidental release or environmental release.

Cyndan Chemicals MSDS's are prepared in accordance with guidelines published by WorkSafe Australia. These guidelines are broadly similar to ISO Standard 11014-1.

### **Liquidzymes – Environmental Statement**

The environmental information provided in the *Liquidzymes* MSDS relates to the product in its concentrated form and the impact of an accidental release of the neat product into the environment – particularly the aquatic environment. The information provided on the concentrate should not be confused with the environmental impact of the product when used in accordance with the Directions for Use.

The MSDS should also be read in the context of the scale on which the product is being handled and, in the event of a spill, in the context of the scale of the spill. Clearly, risks increase as the scale increases – for example, a minor spill (<1L) has very different environmental consequences to the accidental release of 1000L of concentrate.

By way of analogy, fish will die if large volumes of pure whiskey, shampoo, milk, honey, etc are poured directly into the aquatic environment. However, none of these products are regarded as environmentally hazardous because this is not the way these products are intended to be used. Similarly, *Liquidzymes* will kill fish if poured in a large enough volume directly into the aquatic environment. But this is not the way *Liquidzymes* is used.

*Liquidzymes* is diluted with water at least 100,000 times before application. At this dilution the toxicity of the product to aquatic organisms is negligible. By any standard measure, the diluted product is harmless to the aquatic environment.

Furthermore, the product begins to biodegrade when it is diluted. The estimated rate of degradation is 4% per day and may be substantially higher in some wastewater systems. Thus, if the retention time in the wastewater treatment works is 3 days, there is at least a further 12% reduction in the concentration of *Liquidzymes* in the discharge water. The reduction in residual concentration is correspondingly higher for longer retention times.

Upon discharge from the treatment plant, the discharge water is generally diluted by at least a factor of ten (and in many cases substantially more) further reducing the residual *Liquidzymes* concentration to levels that present no hazard whatsoever to the aquatic environment.

In my opinion, *Liquidzymes* offers a high degree of safety to users and no measurable risk to persons coming into casual contact with the products during normal use.

Furthermore, the products have no negative environmental impact

when used in accordance with the Directions for Use.

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