



Limone – PROPOSED SCHEDULING DECISION

For incorporation in the *Industrial Chemicals Environmental Management (Register) Instrument 2022*

Schedule 4 – Relevant industrial chemicals that may cause harm to the environment

The risk management measures apply to the relevant industrial chemicals and mixtures containing such chemicals.

This decision is based on information presented in the [National Industrial Chemicals Notification and Assessment Scheme \(NICNAS\) assessment report](#).

Please note that this decision applies only to chemicals with industrial uses. Other chemical applications, such as for veterinary or medicinal uses, are outside the scope of the Industrial Chemicals Environmental Management Standard (IChEMS) and are managed under separate regulatory frameworks.

Definitions for terms contained in this decision may be found in the [Industrial Chemicals Environmental Management \(Register\) Act 2021](#), the [Industrial Chemicals Environmental Management \(Register\) Instrument 2022](#), the [Industrial Chemicals Environmental Management \(Register\) Principles 2022](#), or in the [Glossary of IChEMS terms](#).

* “Intent and explanatory notes” are provided for information in this document only. This text will not be published on the IChEMS Register.

Relevant industrial chemical	Intent and explanatory notes*
Chemical name: Limonene. CAS numbers: 5989-27-5; 5989-54-8; 138-86-3; 68647-72-3; 68917-57-7; 68917-58-8; 65996-99-8; 68956-56-9; 8028-48-6.	Total of 9 CAS RNs. The schedule includes limonene’s <i>d</i> and <i>l</i> isomers, and the mixture of <i>dl</i> -limonene known as dipentene. Also included are CAS RNs for commercial grades of limonene, such as ‘terpenes and terpenoids, turpentine oil, limonene fraction’.
End uses or generalised end uses	Intent and explanatory notes*
(a) adhesive and sealant products; (b) air care products; (c) cleaning and furniture care products; (d) extractive products;	Limonene is widely used either used directly or further diluted or mixed with other components in the formulation of a large range of industrial and consumer products.

<p>(e) fragrances; (f) fuel and fuel related products; (g) laundry and dishwashing products; (h) paints and coatings; (i) personal care products; (j) solvents.</p>	<p>Limonene is used in industrial cleaning products, flavouring and fragrance agents, essential oils, and many miscellaneous uses (e.g. car detailing, lubricant, masking agent, paper softener, first aid products, tyre shine aerosols, etc.).</p> <p>The largest use of products containing d-limonene in industry is as heavy-duty hand cleaners.</p> <p>The use of limonene in pharmaceuticals and food additives is outside the scope of IChEMS.</p>
<p>Risk management measures</p>	<p>Intent and explanatory notes*</p>
<p>(a) This entry comes into effect 1 January 2027.</p>	<p>The commencement date is 6 months after the planned addition to the IChEMS Register.</p>
<p>(b) The chemical (whether on its own or in mixtures) must be managed according to the IChEMS Minimum Standards.</p>	<p>Available online. As agreed on 4 November 2022 by Commonwealth, State and Territory environmental regulators.</p> <p>STANDARD 1 – INFORMATION AND AWARENESS</p> <p>Obtain, share, and use information on the environmental risks of industrial chemicals to ensure that any persons handling the chemical throughout the supply chain are aware of these risks, and enabled to undertake activities using industrial chemicals in an environmentally safe manner.</p> <p>For introducers (importers and manufacturers) and reformulators, this includes a requirement to develop and provide information to the supply chain about the environmental risks of the industrial chemical, when used for the purpose for which it was manufactured.</p> <p>STANDARD 2 – RISK MANAGEMENT PLANNING</p> <p>Identify risks and develop, assess, evaluate and monitor control measures.</p> <p>STANDARD 3 – HARM MINIMISATION CONTROLS</p> <p>Apply practicable control measures to eliminate risks, then reduce risks that cannot be eliminated, then manage residual risks using best available techniques and best environmental practices.</p> <p>STANDARD 4 – ENVIRONMENTALLY SAFE STORAGE</p>

	<p>Store and contain industrial chemicals in an environmentally safe manner.</p> <p>STANDARD 5 – EFFECTIVE RESPONSES TO INCIDENTS</p> <p>Plan for and respond effectively and promptly to industrial chemical incidents.</p> <p>STANDARD 6 – ENVIRONMENTALLY RESPONSIBLE WASTE MANAGEMENT</p> <p>Implement waste management for industrial chemicals in an environmentally safe manner in line with the waste hierarchy and local requirements.</p>
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