

Hexachlorobenzene – PROPOSED DECISION

[For incorporation in] Industrial Chemicals Environmental Management (Register) Instrument 2022

Schedule 7 – Relevant industrial chemicals that are likely to cause serious or irreversible harm to the environment with no essential uses

The risk management measures including prohibitions and restrictions apply to the relevant industrial chemical; and a product or article containing such a chemical.

The draft standards are based on control measures for the management of hexachlorobenzene (HCB) as described in [the Stockholm Convention on Persistent Organic Pollutants](#) (and as ratified by Australia in 2004). The department has also referred to an [Australian Industrial Chemical Introduction Scheme \(AICIS\) evaluation](#) for supporting information on HCB.

Please note that proposed standards apply only to industrial chemicals and 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.

Relevant industrial chemical	Intent and explanatory notes												
Chemical name: Benzene, hexachloro- (Hexachlorobenzene) CAS number: 118-74-1	<p>The department proposes to identify the chemical in this way for consistency with both the AICIS evaluation identifier and international treaties.</p> <p>AICIS assessed the risks of HCB to the environment and human health. In its risk evaluation (AICIS 2022), the chemical name and CAS number are identified as:</p> <table data-bbox="891 986 1870 1161"> <tr> <td><i>CAS number</i></td> <td>118-74-1</td> </tr> <tr> <td><i>Chemical name</i></td> <td>Benzene, hexachloro-</td> </tr> <tr> <td><i>Molecular formula</i></td> <td>C₆Cl₆</td> </tr> <tr> <td><i>Associated names</i></td> <td>hexachlorobenzene, HCB, 1,2,3,4,5,6-hexachlorobenzene, perchlorobenzene</td> </tr> </table> <p>The Stockholm Convention on Persistent Organic Pollutants identifies the chemical as:</p> <table data-bbox="902 1268 1422 1335"> <tr> <td><i>Chemical name</i></td> <td>Hexachlorobenzene</td> </tr> <tr> <td><i>CAS number</i></td> <td>118-74-1</td> </tr> </table>	<i>CAS number</i>	118-74-1	<i>Chemical name</i>	Benzene, hexachloro-	<i>Molecular formula</i>	C ₆ Cl ₆	<i>Associated names</i>	hexachlorobenzene, HCB, 1,2,3,4,5,6-hexachlorobenzene, perchlorobenzene	<i>Chemical name</i>	Hexachlorobenzene	<i>CAS number</i>	118-74-1
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Risk management measures including prohibitions and restrictions	Intent and explanatory notes
(a) This entry comes into effect on 1 July 2025.	<p>The date of effect of 1 July 2025 is proposed for HCB. This will allow approximately 6 months before the standards come into effect, assuming that standards are finalised in late-2024.</p> <p>Hexachlorobenzene has no current industrial use in Australia, so a lengthy adjustment period is not required for entities to adapt to the standard.</p> <p>The import of HCB in goods into Australia has been prohibited under the Customs (Prohibited Imports) Regulations 1956 since 1987.</p>
(b) The manufacture of the chemical is prohibited except for:	<p>This measure sets out that the manufacture of HCB will be prohibited, in line with the requirements of the Stockholm Convention (Article 3, paragraph 1(a)(i)) and the Industrial Chemical Environmental Management (Register) Principles 2022 (ICEMR Principles; section 14(2)(a)).</p> <p>Please note that the term <i>manufacture</i> refers to the synthesis, or extraction, of the chemical. In this context, <i>manufacture</i> does not include production of HCB-containing products or articles, which is defined as <i>use</i>. The definitions of <i>manufacture</i> and <i>use</i> can be found in the definitions section, below.</p>
(i) in circumstances where the chemical is present as unintentional trace contamination at a level equal to or below 5 mg/kg; or	<p>Hexachlorobenzene may be unintentionally manufactured by various processes. Thus, this measure permits the manufacture of HCB only if it is present unintentionally and unavoidably in chemical mixtures and articles.</p> <p>The proposed 5 mg/kg threshold aligns with the maximum quantity of HCB present in products according to data provided to AICIS in its risk evaluation.</p> <p>Further, the Industrial Chemicals Act 2019 does not apply to incidentally introduced chemicals.</p>
(ii) research or laboratory purposes.	<p>The listing of HCB in Annex A of the Stockholm Convention prohibits the production of HCB for all purposes. However, the convention does not apply to quantities of a chemical to be used for laboratory-scale research or as a reference standard (Article 3, paragraph 5).</p>

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	The manufacture for research or laboratory purposes is also permitted under section 14(2)(a)(i) of the ICEMR Principles.
(c) The import and export of the chemical (whether on its own or in mixtures or in articles) is prohibited except:	<p>The import and export of HCB will be prohibited, in line with the requirements of the Stockholm Convention (Article 3, paragraph 1(a)(ii)) and the ICEMR Principles (subsection 14(2)(a)).</p> <p>The ICEMR Principles require Schedule 7 listings to prohibit export and import of the chemicals except in specified circumstances.</p> <p>Import of goods and substances containing HCB is prohibited under regulation 51 of the Customs (Prohibited Import) Regulations 1956, unless written permission to import has been granted from the Minister of Home Affairs.</p> <p>The industrial use of HCB is not subject to the prior informed consent procedure under the Rotterdam Convention.</p>
(i) in circumstances where the chemical is present as unintentional trace contamination at a level equal to or below 5 mg/kg; or	<p>The Stockholm Convention requires that parties take measures to eliminate import, export and use of chemicals listed in Annex A, quantities of a chemical occurring as unintentional trace contaminants in products and articles are not considered to be controlled under the convention, unless otherwise specified (Annex A, Part I, note (i)).</p> <p>This measure permits the import and export of HCB if it is present unintentionally and unavoidably in chemical mixtures and articles.</p> <p>The UTC level is proposed to be equal to or less than 5 mg/kg. The considerations underpinning this threshold are the same as those set out for (b)(i) above.</p>
(ii) for research or laboratory purposes; or	<p>The Stockholm Convention requires the prohibition of import and export of chemicals listed in Annex A (Article 3, paragraph 1(a)(ii)). However, the prohibition does not apply to quantities of a chemical to be used for laboratory-scale research or as a reference standard (Article 3, item 5).</p> <p>Import or export for research or laboratory purposes is permitted under the ICEMR Principles (subsection 14(2)(a)(i)).</p>

	Import of goods and substances containing HCB is prohibited under regulation 51 of the Customs (Prohibited Import) Regulations 1956, unless written permission to import has been granted from the Minister of Home Affairs. Permission may be granted for the purposes of laboratory scale research or for environmentally sound disposal.
(iii) if a hazardous waste permit authorises the import or export of the chemical.	<p>The Stockholm Convention requires the prohibition of import and export of chemicals listed in Annex A unless for the purpose of environmentally sound disposal (Article 3, paragraph 2(a) and (b)).</p> <p>Import or export for the purposes of environmentally sound disposal is permitted under the ICEMR Principles (subsection 14(2)(a)(ii)).</p> <p>Import or export of HCB is proposed to be permitted for the purposes of environmentally sound disposal in accordance with the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, subject to approval under the Hazardous Waste (Regulation of Exports and Imports) Act 1989.</p>
(d) The use of the chemical (whether on its own or in mixtures or in articles) is prohibited except:	<p>This measure sets out that use of the chemical, including in the production of articles, or the use of an article containing the chemical, is prohibited except for specified purposes.</p> <p>The Stockholm Convention prohibits industrial use of HCB with exemptions where the chemical is an intermediate or a closed system site limited intermediate.</p> <p>Please note that the term <i>use</i> includes handling, transporting and storing. The definitions of <i>use</i> and <i>end use</i> can be found in the definitions section, below.</p>
(i) in circumstances where the chemical is present as unintentional trace contamination at a level equal to or below 5 mg/kg or	Same considerations as (b)(i) above.
(ii) for research or laboratory purposes; or	Use of the chemical for research or laboratory purposes is permitted under the ICEMR Principles (section 14(2)(b)(i)).

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<p>(iii) for the purposes of environmentally sound disposal; or</p>	<p>Use of the chemical for the purposes of environmentally sound disposal is permitted under the ICEMR Principles (section 14(2)(b)(ii)).</p>
<p>(iv) in circumstances in which the article is already in use on or before 1 July 2025.</p>	<p>The Stockholm Convention requires that parties take measures to eliminate use of chemicals listed in Annex A. However, quantities of a chemical occurring as constituents of articles manufactured or already in use are not considered to be controlled under the convention (Annex A, Part I, note (ii)).</p>
<p>(e) The import, export and manufacture of the chemical (whether on its own or in mixtures or in articles) must adhere to applicable laws of the Commonwealth for the control of industrial chemicals.</p>	<p>As described in sections (b) and (c) above, the manufacture, import and export and is proposed to be permitted for excepted purposes only.</p> <p>This provision is included to ensure that introducers (manufacturers and importers) and exporters adhere to all other relevant Commonwealth.</p>
<p>(f) The use of the chemical (whether on its own or in mixtures or in articles) must adhere to applicable laws of the Commonwealth or the relevant State for the control of industrial chemicals.</p>	<p>As described in section (d) above, use is proposed to be permitted for excepted purposes only.</p> <p>This measure is included to ensure that users adhere to all other relevant Commonwealth, state and territory legislation, and that states and territories have control within their jurisdiction.</p>
<p>(g) Producers and holders of waste must undertake all reasonably practicable measures to avoid contamination of waste not already containing the chemical; and must not dilute waste containing the chemical to lower the concentration below relevant waste handling and disposal thresholds.</p>	<p>This measure is included to avoid contamination of other waste with HCB, and dilution of HCB-containing waste to meet the limit specified.</p>
<p>(h) Waste consisting of, containing or contaminated with the chemical at a</p>	<p>Article 6, paragraph 1, of the Stockholm Convention sets out how parties are to reduce or eliminate releases from stockpiles and wastes: wastes, including products and articles, must be disposed so that</p>

<p>concentration that is equal to, or greater than 50 mg/kg must be either:</p> <p>(i) treated in such a way as to ensure that the chemical is destroyed or irreversibly transformed so that the remaining waste and environmental releases do not contain chemicals that exhibit Schedule 6 or Schedule 7 risk characteristics, or</p> <p>(ii) managed or disposed of in an environmentally sound manner as authorised under a law of the Commonwealth or a law of a State, where treatment in accordance with subparagraph (i) is not the environmentally preferable option.</p>	<p>the persistent organic pollutant (POP) content is destroyed or irreversibly transformed, or otherwise disposed of in an environmentally sound manner if destruction is not the environmentally preferable option or if the POP content is low (Article 6, paragraph 1(d)(ii)).</p> <p>The low POP content is established along with the appropriate bodies of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. The low POP content for HCB, as defined by the provisions on hazardous waste under the Basel Convention, is 50 mg/kg (UNEP/CHW.13/6/Add.4/Rev.1).</p> <p>This measure allows for decisions on waste management to be made by jurisdictions.</p> <p>Where treatment is not the environmentally preferable option, the chemical may be managed or disposed of in an environmentally sound manner. ‘Environmentally sound manner’ can include state and territory regulations/policies, for example end of waste codes, clean fill codes, or nationally agreed guidance.</p> <p>More information regarding the disposal of low POP content waste is available in Part IV, Section G, subsection 4 of the General Technical Guidelines published by the Basel Convention: UNEP/CHW.15/6/Add.1/Rev.1</p>
<p>(i) Waste consisting of, containing or contaminated with the chemical at a concentration that is less than 50 mg/kg must be managed or disposed of in an environmentally sound manner as authorised under a law of the Commonwealth or a law of a State.</p>	<p>This measure allows for decisions on waste management to be made by jurisdictions.</p> <p>‘Environmentally sound manner’ can include state and territory regulations/policies, for example end of waste codes, clean fill codes, or nationally agreed guidance.</p> <p>More information regarding the disposal of low POP content waste is available in Part IV, Section G, subsection 4 of the General Technical Guidelines published by the Basel Convention: UNEP/CHW.15/6/Add.1/Rev.1</p>
<p>(j) Disposal must not lead to recovery, recycling, reclamation or re-use of the chemical, subject to paragraph (k).</p>	<p>Any disposal must not involve recovering the chemical and using it elsewhere.</p>

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<p>(k) In carrying out disposal, the chemical may be isolated from the waste, provided that it is subsequently disposed of in accordance with paragraphs (h) and (i).</p>	<p>The chemical may be removed from contaminated waste so that the waste may, for example, be reused. The removed chemicals must then be disposed of appropriately.</p>
<p>(l) If an activity in relation to the chemical (whether on its own or in mixtures or in articles) is not permitted under paragraph (b), (c) or (d), a holder of a stockpile of the chemical must:</p> <ul style="list-style-type: none"> (i) notify the relevant agency responsible for environmental protection of the nature and size of the stockpile; and (ii) manage that stockpile as waste in accordance with paragraphs (h) and (i); and (iii) comply with all relevant laws that apply in the relevant jurisdiction. 	<p>Any user of the chemical, if the use is no longer permitted, must inform their jurisdiction and appropriately manage the chemical as waste.</p>
<p>(m) The chemical (whether on its own or in mixtures or articles) must be managed according to the IChEMS Minimum Standards.</p>	<p>Available online. As agreed 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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Terms defined in the Register instrument

disposal has the same meaning as in the *Hazardous Waste (Regulation of Exports and Imports) Act 1989*.

Note: Other grammatical forms of “disposal” (such as “disposed of”) have a corresponding meaning (see section 18A of the *Acts Interpretation Act 1901*).

environmental release means any introduction of pollutants into the environment as a result of any human activity, whether deliberate or accidental, routine or nonroutine.

hazardous waste export permit means an export permit within the meaning of the *Hazardous Waste (Regulation of Exports and Imports) Act 1989*.

hazardous waste import permit means an import permit within the meaning of the *Hazardous Waste (Regulation of Exports and Imports) Act 1989*.

hazardous waste permit means a permit granted under the *Hazardous Waste (Regulation of Exports and Imports) Act 1989* or the *Hazardous Waste (Regulation of Export and Imports) (OECD Decision) Regulations 1996*.

IChEMS Minimum Standards means the minimum standards agreed to by Commonwealth, State and Territory environmental regulators as published by the [Environment] Department and as existing from time to time.

industrial use has the same meaning as in the *Industrial Chemicals Act 2019*.

relevant agency includes:

(a) a department, agency or authority of the Commonwealth; and

(b) a State government body.

Schedule 6 risk characteristics has the same meaning as in the [Industrial Chemicals Environmental Management \(Register\) Principles 2022](#).

Schedule 7 risk characteristics has the same meaning as in the [Industrial Chemicals Environmental Management \(Register\) Principles 2022](#).

stockpile of a relevant industrial chemical means an accumulation of substances, mixtures or articles that contains, or consists of, the chemical.

unintentional trace contamination means circumstances where a chemical is present unintentionally and unavoidably below a set level at which the chemical cannot be meaningfully used.

waste has the same meaning as in the *Hazardous Waste (Regulation of Exports and Imports) Act 1989*.

Terms defined in the *Industrial Chemicals Environmental Management (Register) Act 2021*

CAS number for an industrial chemical has the same meaning as in the Industrial Chemicals Act

end use for an industrial chemical has the same meaning as in the Industrial Chemicals Act.

Environment Department means the Department administered by the Minister administering this Act.

relevant industrial chemical means:

(a) a particular industrial chemical; or

(b) a particular class of industrial chemicals.

State includes the Northern Territory and the Australian Capital Territory.

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Terms defined in the *Industrial Chemicals Act 2019*

article means an object that:

- (a) is produced for use for a particular purpose, being a purpose that requires that the object have a particular shape, surface or design; and
 - (b) is formed to that shape, surface or design during production; and
 - (c) undergoes no change of chemical composition when used for that purpose except as an intrinsic aspect of that use;
- but does not include an object of a kind prescribed by the rules for the purposes of this definition.

end use, for an industrial chemical, means a purpose to which the industrial chemical can be applied.

manufacture an industrial chemical means do any of the following:

- (a) produce the industrial chemical in the course of a chemical reaction;
- (b) extract the industrial chemical from a natural environment, with or without chemical change;
- (c) extract the industrial chemical from a UVCB substance;
- (d) produce or extract the industrial chemical in circumstances prescribed by the rules for the purposes of this paragraph;

but does not include producing or extracting the industrial chemical as described in paragraphs (a), (b) or (c) in circumstances prescribed by the rules for the purposes of this definition.

use, for an industrial chemical, includes any of the following activities involving the industrial chemical:

- (a) processing;
- (b) formulating;
- (c) storing;

- (d) transporting;
 - (e) filling into containers;
 - (f) transferring from a container to another container;
 - (g) handling;
 - (h) mixing;
 - (i) sampling and testing;
 - (j) producing an article;
 - (k) releasing into the environment (with or without prior treatment);
 - (l) activities relating to an end use for the industrial chemical;
 - (m) any other activity prescribed by the rules for the purposes of this paragraph;
- but does not include an activity prescribed by the rules for the purposes of this definition.