



September 2023

Proposed scheduling decisions on several brominated flame retardants

Questions and Answers

The Minister for the Environment is seeking public comment on the scheduling of four chemicals under the Industrial Chemicals Environmental Management Scheme (IChEMS).

The chemicals are brominated flame retardants (BFRs) listed under the Stockholm Convention:

- Decabromodiphenyl ether (decaBDE) and nonabromodiphenyl ether (nonaBDE) – also known as Commercial decaBDE
- Octabromodiphenyl ether (octaBDE), heptabromodiphenyl ether (heptaBDE) and hexabromodiphenyl ether (hexaBDE) – also known as Commercial octaBDE
- Pentabromodiphenyl ether (pentaBDE) and tetrabromodiphenyl ether (tetraBDE) – also known as Commercial pentaBDE
- Hexabromocyclododecane (HBCDD)

These chemicals are recognised globally as persistent organic pollutants (POPs). They are known for their toxic and ecotoxic properties, ability to persist in the environment and accumulate in food chains, and their risks to the environment and human health. Persistent organic pollutants are a priority for scheduling under the IChEMS.

What are BFRs and why are they used?

Brominated flame retardants are a family of chemicals used to reduce the risk of fire. They are added to products and articles to slow down or stop the spread of a fire or reduce its intensity.

Brominated flame retardants are additive flame retardants, which means that they are not chemically bound to the material to which they are added. They are instead mixed with, or impregnated into, the material or applied as a coating. They are typically used in plastic, textile and rubber products.

Although many types of BFRs exist, we have focused on the BFRs currently listed under the Stockholm Convention as a first step in the phase out of this family of chemicals.

What do these proposed decisions mean?

Commercial octaBDE, commercial pentaBDE, and HBCDD are proposed for listing in Schedule 7 of the IChEMS Register as they are likely to cause serious or irreversible harm to the environment. Schedule 7 chemicals cannot be imported, exported, manufactured or used within Australia.

Some exceptions apply, for example, where the chemical appears in a product or article in trace amounts, or where it is already in use in an article before the decision's date of effect.

Commercial decaBDE is proposed for listing in Schedule 6 of the IChEMS Register. This chemical is also likely to cause serious or irreversible harm to the environment, and normally cannot be imported, exported, manufactured or used within Australia. This chemical, however, still has some uses which are considered to be essential. These proposed essential uses are time-limited and will have strict controls applied to them.

The proposed start date for the decisions on commercial octaBDE, pentaBDE and HBCDD is 1 July 2024, and 1 July 2025 for commercial decaBDE. This will give stakeholders time to prepare for the prohibitions on these chemicals before they begin.

What does this mean for fire safety?

The proposed decision for commercial decaBDE allows this chemical to be used in textile products, other than clothing and toys, until January 2027.

- We are proposing to ban the use of commercial decaBDE in toys to reduce the exposure of children to this chemical. Alternative chemicals and manufacturing methods are available that can provide equivalent flame retardancy, so this decision will not increase fire risks for children.
- We are proposing to ban the use of commercial decaBDE in clothing because there is limited information that this is an ongoing use in Australia, and there are a wide range of alternative methods for reducing fire risk in clothes.

Use of decaBDE in manufacturing new aircraft is proposed to be phased out in 2027. The import and manufacture of spare parts for aircraft manufactured before 2027 will be allowed until the end of the service life of the aircraft. For motor vehicles manufactured before 2019, the import and manufacture of spare parts will be allowed to continue until 2036. These dates are aligned with the provisions of the Stockholm Convention and European Union (EU) regulations. This will allow the use of aircraft and motor vehicles until the end of their useful life and allow the aerospace and automotive industries time to adapt to these new standards and to certify safe alternatives.

Use of the chemical in manufacturing polyurethane foam for building insulation is also proposed for phase-out by 2027, but the insulation will be allowed to remain in place until the end of its service life.

What does this mean for waste and recycling?

The proposed decisions mean that waste containing these chemicals will need to be appropriately managed to reduce the risk of environmental contamination. The type of management will depend on the concentration of the chemicals in the waste. Highly contaminated waste will generally need to be destroyed or transformed so that the chemicals do not pose a risk to the environment. Less contaminated waste will need to be managed or stored in an environmentally safe way, according to the laws of the relevant jurisdiction.

Goods made with recycled content contaminated with these BFRs can be imported, made and used where the amount of contamination is below the relevant unintentional trace contaminant limit.

What about human health?

The focus of IChEMS and our department is environmental protection, so the proposed decisions focus on the environmental risks of these chemicals.

Reducing the amount of BFR chemicals entering the environment will also reduce human exposure to these chemicals.

What sources did you use to develop your proposed decisions?

The proposed decisions draw on established international practices, particularly the European Union's (EU) Regulation on Persistent Organic Pollutants (EU 2019/1021).

The department also sought information from industry, states and territories and the IChEMS Advisory Committee. We used this information to adapt the international regulations for the Australian context.

How did you tailor international regulations to fit Australia?

The EU has well developed regulations for POPs including limits for unintentional trace contamination in chemical mixtures and articles, control of waste, and details on essential uses include 'sunset' dates for cessation of those uses.

The EU regulation allows for limited continued use in electrical equipment for commercial octaBDE and commercial pentaBDE. This would be the equivalent of a Schedule 6 decision under IChEMS. We have instead proposed a Schedule 7 decision (no allowed essential uses) for these chemicals. Data indicates that there are no essential uses of these chemicals in Australia.

The EU regulation allows for some essential uses for commercial decaBDE. This would be the equivalent of a Schedule 6 decision under IChEMS. We have adopted this approach for the proposed decision as Australian data indicates some ongoing essential uses of this chemical. We have also proposed an additional essential use for fire protection in building insulation, as recent data shows that this use still occurs in Australia.

The proposed permitted essential uses will be time limited, with dates based on the EU regulation and Stockholm Convention where available. For uses where the EU or Stockholm Convention does not set a time limit, we have suggested a phase-out date of January 2027, which broadly aligns with the EU phase out dates for uses other than aircraft and motor vehicles.

A review date has been proposed for trace contamination limits and for waste threshold limits. This will facilitate reducing these limits as background levels of these chemicals reduce over time, and as technology improves and these improvements lead to reduction of internationally agreed limits.

Where can I find more information on IChEMS?

Please visit our [website](#) for more information. You can also visit our page on [IChEMS Scheduling](#) for more information on how scheduling works.