

Format for submitting pursuant to Article 8 of the Stockholm Convention the information specified in Annex E of the Convention

Introductory information	
Name of the submitting Party/observer	Australia
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Chemical name (as used by the POPS Review Committee (POPRC))	Pentabromodiphenyl ether
Date of submission	(to be completed when submitted)

(a) Sources, including as appropriate (provide summary information and relevant references)	
(i) Production data:	None produced in Australia
Quantity	
Location	
Other	Imports: 1998/99 – 105 tonnes 2003/04 – 38 tonnes In 2004, Australia, through the National Industrial Chemicals Notification and Assessment Scheme (NICNAS), was advised that all importers were phasing out imports of pentabromodiphenyl ether by the end of 2005, and this was reconfirmed by the major importers in mid 2005.
(ii) Uses	2003/04: In manufacture of polyurethane foams for bedding, furniture, motor vehicles, refrigerators, packaging In epoxy resin formulations supplied into aerospace market for use as potting agents, laminating systems and adhesive systems
(iii) Releases:	
Discharges	
Losses	
Emissions	
Other	

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(b) Hazard assessment for endpoints of concern, including consideration of toxicological interactions involving multiple chemicals (provide summary information and relevant references)

Hazard assessment of pentabromodiphenyl ether is currently underway in Australia as part of a Priority Existing Chemical risk assessment.

(c) Environmental fate (provide summary information and relevant references)

Chemical/physical properties	
Persistence	Not aware of any Australian specific data.
How are chemical/physical properties and persistence linked to environmental transport, transfer within and between environmental compartments, degradation and transformation to other chemicals?	Not aware of any Australian specific data.
Bio-concentration or bio-accumulation factor, based on measured values (unless monitoring data are judged to meet this need)	Not aware of any Australian specific data.

(d) Monitoring data (provide summary information and relevant references)	
<p>Information on biomonitoring of PBDE congeners in Australia includes two studies looking at blood levels:</p> <p>Pooled blood serum collected in 2003 from an Australia wide group of around 1000 males and females aged 31 to 45 showed an aggregate PBDE level of 11 ng/g lipid. This was below levels seen in blood in North America, but above the levels seen in Europe. Congener profiles were dominated by BDE-47 and BDE-99, major constituents of pentabromodiphenyl ether, and were stated to be similar to those seen in Japan, North America and Europe (Harden, 2004).</p> <p>Reference Harden F A, Toms L M L, Ryan J J & Mueller J F (2004). "Determination of the levels of polybrominated diphenylethers (PBDEs) in pooled blood sera obtained from Australians aged 31-45 years." In: Proceedings of the Third International Workshop on Brominated Flame Retardants, June 6-9 2004, Toronto, Canada: 59-62</p> <p>In a study looking organochlorine pesticides and PBDEs in human milk, 173 samples of breast milk were collected from 12 regions of Australia during the period March 2002 and September 2003. These samples were pooled into 17 samples for analysis. The results indicated that the levels of the measured congeners seen in Australian breast milk are higher than those observed in Europe but lower than those in North America. The levels of sum concentrations of PBDEs detected ranged from a minimum of 6.0 ng/g lipid to a maximum of 18 ng/g lipid. All dominant congeners (BDE-28, 33, 47, 99 and 100) relate to the commercial product pentaBDE.</p> <p>Reference Harden F, Müller J & Toms L 2005, <i>Organochlorine Pesticides (OCPs) and Polybrominated Diphenyl Ethers (PBDEs) in the Australian Population: Levels in Human Milk</i>, Environment Protection and Heritage Council of Australia and New Zealand (http://www.ephc.gov.au/pdf/EPHC/OCP_PBDE_human_milk_jan%202005.pdf)</p> <p>In 2005, the Australian Government commissioned three further studies to measure the levels of a range of brominated flame retardants, including PBDEs, in the Australian population (through blood serum), in aquatic sediments and indoor environments. The results of these studies will be released sometime in 2006 and will be provided to the Review Committee.</p>	

(e) Exposure in local areas (provide summary information and relevant references)	
<p>- general</p> <p>- as a result of long-range environmental transport</p> <p>- information regarding bio-availability</p>	

(f) National and international risk evaluations, assessments or profiles and labelling information and hazard classifications, as available (provide summary information and relevant references)	
<p>An exposure assessment of polybrominated flame retardants (PBFRs) was undertaken in Australia in 2000/01. The assessment focused on use of and potential exposure to PBFRs. This report is available at: http://www.nicnas.gov.au/Publications/CAR/PEC/PEC20.asp. Based on a recommendation of this report, pentabromodiphenyl ether has been selected for a full risk assessment commencing 3 January 2006.</p> <p>Classification details in Australia are:</p> <p>Xn; R48/21/22 Danger of serious damage to health by prolonged exposure in contact with the skin or if swallowed</p> <p>R64 May cause harm to breastfed babies</p>	

N; R50-53 (Environmental classifications, not mandatory)

The following information must be included on the label for this chemical:

Xn ; N ; R: 48/21/22 - 64 - 50/53

S: (1/2) - 36/37 - 45 - 60 - 61

(g) Status of the chemical under international conventions

PBDE is not currently controlled under any global convention, however, it is nominated under the Convention on Long-range Transboundary Air Pollution (CLRTAP) Protocol on Persistent Organic Pollutants.