

Report of the Chemical Review Committee on the work of its fifth meeting

Annex III

Rationales for those chemicals for which only one notification met the criteria of Annex II

D. Hexachlorobutadiene: rationale for the conclusion by the Chemicals Review Committee that the notification for hexachlorobutadiene (CAS No. 87-68-3) from Canada meets all the criteria of Annex II of the Rotterdam Convention

1. In reviewing the notification of final regulatory action by Canada, together with the supporting documentation provided by the Party, the Chemical Review Committee was able to confirm that the action had been taken in order to protect the environment.

2. The notification and supporting documentation identified hexachlorobutadiene as an industrial chemical used mainly as a solvent, while it had also previously been used as hydraulic fluid, heat transfer liquid and an intermediate in production.

3. The Committee established that the final regulatory action had been taken on the basis of a risk evaluation and that the evaluation had been based on a review of scientific data. The available documentation demonstrated that the data had been generated in accordance with scientifically recognized methods and that the data reviews had been performed and documented in accordance with generally recognized scientific principles and procedures. It also showed that the final regulatory action had been based on chemical-specific risk evaluations taking into account the conditions of exposure within Canada.

4. Half-lives of hexachlorobutadiene in different compartments and bioaccumulation are described in the notification and the report. The maximum bioconcentration factor is 19,000 but hexachlorobutadiene does not biomagnify through food chains. Hexachlorobutadiene preferentially accumulates in the livers of fish and can be biotransformed into polar metabolites that are toxic to kidneys in fish. Chronic effects occur at concentrations of an order of magnitude below those causing acute effects. The lowest observed effect concentration (LOEC) for 28 days is 13 micrograms per litre for fish (fathead minnow – *Pimephales promelas*). The lowest lethal concentration (LC50) (over 96 hours) is 32 micrograms per litre for shrimp (marine mysid shrimp – *Mysidopsis bahia*). For benthic organisms no studies were available and the water-sediment equilibrium partitioning approach was therefore used to estimate a critical toxicity value (CTV) of 20.8 micrograms per gram dry weight. The notification and supporting documentation from Canada also provided some data on toxicity (mainly effects on kidneys in experimental animals), although the regulatory action was not based on human health concerns.

5. The Chemical Review Committee concluded that the final regulatory action taken by Canada on the basis of the available supporting documentation provided a sufficiently broad basis to merit including hexachlorobutadiene in Annex III to the Rotterdam

Convention as an industrial chemical. It noted that the action had led to a decrease in the quantities of the chemicals used in the notifying Party. The manufacture, use, sale, offer for sale and import of hexachlorobutadiene were banned, an exception being made only for the unintended incidental presence of the chemical in products.

6. There was no indication that there were any uses of hexachlorobutadiene as a pesticide in Canada.

7. The Committee also took into account that the considerations underlying the final regulatory action were not of limited applicability.

8. On the basis of information provided to the members at its fifth meeting, the Chemical Review Committee could not confirm ongoing international trade in hexachlorobutadiene.

9. The Committee noted that the final regulatory action was not based on concerns about the intentional misuse of hexachlorobutadiene.

10. At its fifth meeting, the Chemical Review Committee concluded that the notification of final regulatory action on hexachlorobutadiene by Canada met the information requirements of Annex I and all the criteria set out in Annex II to the Convention.