

HSAC comments

Environment Agency Assessment of the Chemical Dechlorane Plus

At the 10th Hazardous Substances Advisory Committee (HSAC) meeting the Environment Agency (EA) requested HSAC's views on their assessment of Dechlorane Plus which is registered under REACH for use as an additive flame retardant. The EA had concluded that this chemical met the vPvB (very persistent and very bioaccumulative) criteria in Annex XIII of the REACH.

The HSAC commended the EA on their conscientious assessment. Members agreed that there was an abundance of evidence to support the EA's conclusion that this chemical was vP. However, the evidence for bioaccumulation was less clear cut. There was a stronger probability of Dechlorane Plus being bioaccumulative, than not, based on both laboratory and field evidence. Nonetheless, it would have been useful to have more biomagnification evidence from realistic environments, but the available studies were flawed. Despite this, the committee agreed that the assumptions made were sensible (e.g. a substance with a high K_{OW} would have a BCF of over 5000 L/kg) and that vPvB was therefore the correct classification for this chemical. A precautionary approach was justified in this case. Microorganisms would struggle to degrade Dechlorane Plus because of the chlorines in its structure. Its presence in remote corners of the world had been noted and bioaccumulation in top predators highly probable.

The assessment of toxicity by Oxychem Corp (a US producer of Dechlorane Plus) was of very poor quality in the HSAC's opinion. The statement that the chemical was not toxic in sediment was of particular concern to the committee as no consideration had been given to its toxicity to sediment dwelling organisms. There was a reliance on a few academic studies for the information needed despite it being 40 years in production.

Members suggested additional information on entrapment in sewage sludge and dispersal onto the land (in countries where this is permitted) would help understand the environmental impact. Toxicity studies for earthworms and other soil test species as well as river sediment dwellers would be highly desirable.

In summary, the HSAC agreed with the EA view that they could not support the continued use of this chemical on the information received. There were no unique uses of Dechlorane Plus, and there were substitutes available. As the chemical was not a reactive flame retardant and therefore not chemically bound into the substrate matrix the likelihood of it being liberated into the environment was high. The committee also acknowledged that based on what we know now on the structure of this chemical i.e. the high number of chlorine atoms, would cause concern and militate against its commercial production.

More broadly the HSAC considered there was a strategic issue with this kind of chemical. To this end the committee welcomed the suggestion by Steve Dungey (EA) for wider thinking along the lines of 'should PBT (persistent, bioaccumulative and toxic) and vPvB

substances be treated differently in terms of the risk they present and if so, why (and how)?'.

The Secretariat will finalise the committee's comments and forward them to the EA.