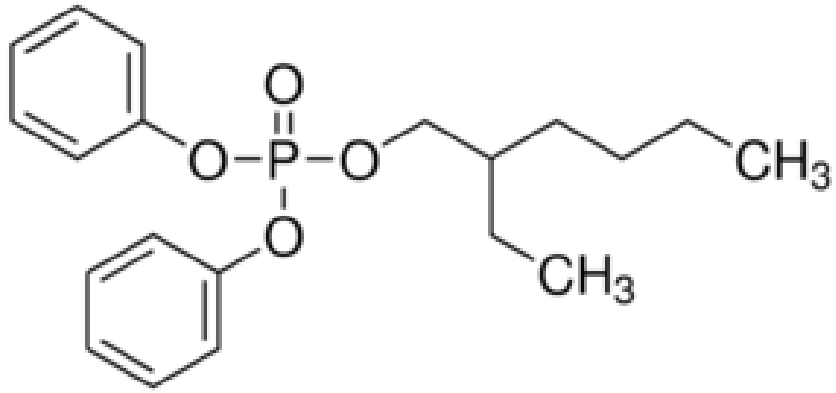

CAS 1241-94-7 Ethylhexyl diphenyl phosphate (EHDPP)

Toxicity

The U.K. Environmental Agency reported dose-dependent alterations in the testes, ovaries, liver, blood, kidney and adrenal glands in rats fed for 90 days.[1,2] Developmental and neurotoxicity screenings reported significant inhibition of mitochondrial activity and larval development and a reduced neuronal firing rate in the nematode *C. elegans*.[3,4]

Exposure

EDHPP is mostly used in flexible PVC as a plasticizer and flame retardant. It has also been used in polyurethanes, hydraulic fluid, rubber, paints, pigment dispersions, film, adhesives, and fabric coatings.[1] EHDPP has been found in household dust and a variety of foods and food packaging such as meat wrapping.[1,2,5] EHDPP was detected in cereals, pastries, meat, fish, dairy, eggs, fruits, vegetables, beverages, oil and sweet samples gathered from Swedish markets in 2015.[6] A Norwegian cohort study detected EHDPP in diet samples at higher levels than all other flame retardants tested.[7]

EHDPP or its metabolites have been detected via biomonitoring in blood, urine and breast milk.[8-11] DPHP, a metabolite of EHDPP, TPHP and RDP, was detected in the urine of infants in North Carolina, children in German day cares, and adults in California.[12-16] EHDPP was detected in samples of chorionic villi collected during the first 8 weeks of pregnancy from women in Beijing, China.[17]

Biodegradation studies have reported EHDPP to have a half-life of 300 days in soil or sediment and 50 days in surface water.[1] Studies have observed bioaccumulation in aquatic life.[2] EDHPP was detected in Canadian and New York wastewater sludge.[18,19]

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