131-18-0 Dipentyl phthalate (DPP, DPNP)

Toxicity

The European Union (EU) lists DPP on the priority list of endocrine disruptors and has identified DPP as a Substance of Very High Concern (SVHC) for reproductive toxicity\(^1,2\).

Among phthalates, DPP was noted to produce some of the most potent reproductive effects by the U.S. Consumer Product Safety Commission (CPSC). The Chronic Hazard Advisory Panel (CHAP) determined exposure to DPP contributes to a cumulative antiandrogenic effect with other phthalates and should be permanently banned in children’s toys and child care articles at levels greater than 0.1 percent.\(^3\) In 2017 the CPSC banned DPP in children’s toys and childcare articles at levels greater than 0.1 percent.\(^4\)

Significantly reduced fetal testicular testosterone levels have been observed in male offspring of pregnant rats fed DPP.\(^5,6\)

Exposure

DPP was detected in hair straightening cream in a 2013 Spanish study.\(^7\) DPP was detected in indoor dust collected in the U.S. from Delaware and Northern California homes.\(^8,9\) DPP was detected in indoor and outdoor air, dust, soil, sediment and plastic film in India, and tea, liquor, soil, and indoor air from automobiles in China.\(^10\-16\) In Austria and Germany, a metabolite of DPP, MnPEP, was found in children’s urine.\(^17,18\)

References


