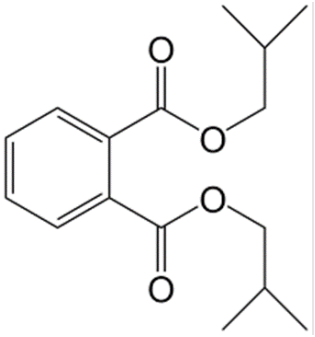
CAS 84-69-5

Diisobutyl phthalate (DIBP)

$C_{16}H_{22}O_4$

VERMONT
DEPARTMENT OF HEALTH



Summary of Health Effects

DIBP may harm development and the reproductive system, based on animal studies.

How is DIBP used?

DIBP is a plasticizer in used in consumer products as a substitute ingredient to di-n-butyl phthalate (DBP) due to structural similarities. Therefore, its presence in products may increase.[1]

Toxicity: What are its health effects?

The European Union classified DIBP as a Substance of Very High Concern due to reproductive toxicity and endocrine disrupting properties.[2] The U.S. Chronic Hazard Advisory Panel determined, due to toxicological similarities to DBP, exposure to DIBP contributes to a cumulative antiandrogenic effect with other phthalates and should be permanently banned in children's toys and child care items at levels greater than 0.1 percent.[3] In 2017, the U.S. Consumer Product Safety Commission permanently banned DIBP in children's toys and child care items at levels above 0.1 percent.[4]

Male rats fed DIBP for four days had lowered testicular testosterone.[5] Pregnant rats fed DIBP from gestation day seven to gestation day 20 or 21 had male offspring with significantly reduced anogenital distance.[1]

Exposure: How can a person come in contact with it?

A person can come in contact with DIBP by breathing in contaminated air or house dust, eating or drinking contaminated food or water, or from contact with consumer products or contaminated soil.[6]

The 2015 National Health and Nutrition Examination Survey monitored metabolites of DIBP in human urine, and the levels appeared to be increasing in the total population.[7] DIBP metabolites were detected in the urine of pregnant Danish women in a 2010-2012 study.[8] A significant correlation was found between DIBP metabolite concentrations in the urine of Danish children and increased levels of DIBP in dust in bedrooms and day care centers.[9]

References

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