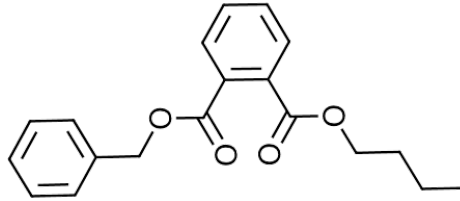


CAS 85-68-7

Butyl Benzyl Phthalate (BBP)

C₁₉H₂₀O₄



Summary of Health Effects

Butyl Benzyl Phthalate (BBP) can affect the reproductive system in animals. It can also affect how baby animals develop.

How is BBP used?

BBP is used to make perfume, carpet backing, vinyl tiles and in polyvinyl chloride (PVC) products.¹

Toxicity: What are its health effects?

The National Toxicology Program concluded that BBP can affect reproduction and development in animals.¹

Of eight phthalates studied by the Environmental Protection Agency, BBP was found to be one of the three most toxic to terrestrial organisms, fish and aquatic invertebrates.²

BBP is on the European Union's list of substances with documented endocrine-disrupting effects.³

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

A person can come in contact with BBP by breathing in contaminated air, drinking contaminated water, eating contaminated foods, or from skin contact with consumer products.¹

The 1999-2002 National Health and Nutrition Examination Survey (NHANES) results show that BBP was found in more than 98% of urine samples.⁴ A study conducted in a German nursery school took urine samples from children, teachers and parents, and tested these samples for metabolites of BBP. The study found that the levels of BBP metabolites were significantly higher in children than in the teachers and parents who were tested.⁵

Other Information

The European Commission and the U.S. Consumer Product Safety Commission (CPSC) banned BBP in all toys and child care articles at concentrations greater than 0.1% (or 1,000 parts per million) by mass.^{6,7}

The CPSC also noted that exposures may occur simultaneously with other phthalates and cumulatively contribute to an overall risk.⁷

References

1. U.S. Department of Health and Human Services, National Toxicology Program, Center for the Evaluation of Risks to Human Reproduction (2003). *CERHR Monograph on the potential human reproductive and developmental effects of butyl benzyl phthalate (BBP)*. Retrieved from www.ncbi.nlm.nih.gov/pubmed/15995737
2. U.S. Environmental Protection Agency (2012). *Phthalates action plan*. Retrieved from www.epa.gov/sites/production/files/2015-09/documents/phthalates_actionplan_revised_2012-03-14.pdf
3. Danish Ministry of the Environment, Danish Environmental Protection Agency (2004). *List of undesirable substances* (Environmental Review No.15). Retrieved from www2.mst.dk/Udgiv/publications/2004/87-7614-477-1/pdf/87-7614-479-8.pdf
4. Hatch, E.E., Nelson, J.W., Qureshi, M.M., Weinberg, J., Moore, L.L., Singer, M., Webster, T.F. (2008). Association of urinary phthalate metabolite concentrations with body mass index and waist circumference: A cross-sectional study of NHANES data 1999-2002. *Environmental Health*, 7, 27-41. Retrieved from www.ncbi.nlm.nih.gov/pubmed/18522739
5. Koch, H.M., Preuss, R., Drexler, H., Angerer, J. (2005). Exposure of nursery school children and their parents and teachers to di-n-butylphthalate and butylbenzylphthalate. *International Archives of Occupational and Environmental Health*, 78, 223-229. Retrieved from www.ncbi.nlm.nih.gov/pubmed/15776263
6. Official Journal of the European Union (2005). Directive 2005/84/EC of the European Parliament and of the Council. Retrieved from eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:344:0040:0043:en:PDF
7. Consumer Product Safety Commission Rule. Prohibition of Children's Toys and Child Care Articles Containing Specified Phthalates. October 2017. Retrieved from www.federalregister.gov/documents/2017/10/27/2017-23267/prohibition-of-childrens-toys-and-child-care-articles-containing-specified-phthalates