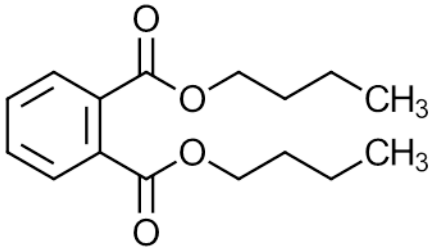
CAS 84-74-2

Dibutyl Phthalate (DBP)

$C_{16}H_{22}O_4$

VERMONT
DEPARTMENT OF HEALTH



Summary of Health Effects

In animals, dibutyl phthalate (DBP) can affect how babies develop before and after they are born, the reproductive system, and how hormones act in the body.

How is DBP used?

DBP is used to make flexible plastic, including plastics in shower curtains, raincoats, food wrap, bowls, car interiors, vinyl fabrics and floor tiles.[1]

Toxicity: What are its health effects?

Dibutyl phthalate (DBP) is listed as a category 1 endocrine disrupting chemical on the European Union's list of potential endocrine disruptors.[2] DBP is considered a Substance of Very High Concern by the European Union due to reproductive toxicity and endocrine disrupting properties.[3]

DBP is considered a developmental and reproductive toxicant by the National Toxicology Program and the State of California under Proposition 65.[4,5]

Rodents exposed to DBP while in the womb and after birth showed adverse developmental and reproductive effects.[6-12] DBP was found to be one of the three most toxic to terrestrial organisms, fish and aquatic invertebrates out of eight phthalates studied by the Environmental Protection Agency (EPA).[13]

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

A person can come in contact with DBP by eating and drinking contaminated food and water, by breathing in contaminated air, or from skin contact.[1,21]

A study conducted by the Danish EPA showed that DBP is present in several children's products including wood toy coatings, foam toys, school supplies, and infant clothing.[14] This study also found that when present in rubber shoes, DBP has the potential to migrate from the shoe to the foot, resulting in dermal absorption.[14]

DBP metabolites have been detected through the 2014 National Health and Nutrition Examination Survey (NHANES), the State of California, and Health Canada biomonitoring studies.[15,16,17] 2014 NHANES results show a metabolite of dibutyl phthalate was detected in human urine in more than 99% of the U.S. population, with higher amounts in children under the age of 12 years.[15] DBP is a high production volume substance and is listed on the EPA's Toxic Release Inventory.[18,19]

Other Information

In 2005, the European Commission banned DBP in all toys and child care articles.[20] In 2008, the U.S. Consumer Product Safety Commission placed a permanent ban on the sale of children's toys or child care articles containing greater than 0.1% DBP by weight.[21]

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