2016 Children's Safe Products - Reporting Rule update
Draft Chemical Evaluation

CAS 84-69-5

Substance Name Diisobutyl phthalate (**DIBP**)

Historical Summary

In 2011, Ecology found evidence of diisobutyl phthalate's (DIBP) potential for exposure in biomonitoring studies, indoor air and dust, children's products, and consumer products [1]. DIBP was not included in the reporting list, because the strongest evidence for hazard was the European Union (EU) Category (Cat) 2 Endocrine Disruption list [2]. EU Cat 2 is considered insufficient evidence, because it is based on *in vitro* data related to endocrine disruption. The EU Cat 1 list is based on evidence of endocrine disrupting activity in at least one species using intact animals [2].

The 2016 Washington Toxics Coalition (WTC) petition [3] asserted that DIBP is now an EU Substance of Very High Concern (SVHC) [4], and the Chronic Hazard Advisory Panel (CHAP) recommended a ban on its use in children's products [5].

Toxicity

As noted, DIBP has been identified as an SVHC, as toxic for reproduction [4]. Substances that may have serious and often irreversible effects on human health and the environment are designated as SVHCs under the EU Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH) law. If a substance is identified as an SVHC, it is added to the Candidate List for eventual inclusion in the Authorisation List [4].

DIBP was included in the CHAP report [5], which notes that animal and human studies suggest that exposure to DIBP can cause reproductive and developmental effects. The Consumer Product Safety Improvement Act of 2008 (CPSIA) directed the U.S. Consumer Product Safety Commission (CPSC) to convene the CHAP "to study the effects of all phthalates and phthalate alternatives as used in children's toys and child care articles" [5]. The CHAP assessed the risks of fourteen phthalates and six phthalate alternatives, including three phthalates permanently banned by the CPSIA and three phthalates subject to an interim ban. The CHAP found the toxicological profile of DIBP to be very similar to other antiandrogenic phthalates, thereby concluding that exposure to DIBP contributes to the cumulative risk from other antiandrogenic phthalates and recommending to CPSC that DIBP be permanently banned from use in children's toys and child care articles at levels greater than 0.1% (1,000 parts per million).

Exposure

In 2011, Ecology found evidence of DIBP in biomonitoring studies, indoor air and dust, children's products, and consumer products [1]. Since then, the CPSC has identified DIBP in toys [5], while DIBP metabolites have been detected in urine in human biomonitoring studies [6].

References

1. Ecology, 2011, Process used to generate the CSPA reporting list. Available at the bottom of this webpage: http://www.ecy.wa.gov/programs/hwtr/rtt/cspa/chcc.html
2. European Commission, Endocrine disruptor priority list. Available at: http://ec.europa.eu/environment/chemicals/endocrine/strategy/substances_en.htm
3. Washington Toxics Coalition, Petition to Ecology for CSPA rulemaking. August 5, 2016.

4. European Chemicals Agency (ECHA) Candidate List of substances of very high concern (SVHC) for Authorisation. Available: http://echa.europa.eu/candidate-list-table
5. Chronic Hazard Advisory Panel (CHAP) on Phthalates and Phthalate Alternatives, July, 2014. Report to the U.S. Consumer Product Safety Commission Directorate for Health Services. https://www.cpsc.gov/PageFiles/169876/CHAP-REPORT-FINAL.pdf
6. Centers for Disease Control and Prevention (CDC). 2015. Fourth National Report on Human Exposure to Environmental Chemicals: Updated Tables February 2015. Atlanta, GA. Available: http://www.cdc.gov/exposurereport/

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