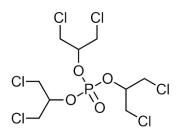
CAS 13674-87-8 Tris (1,3-Dichloro-2-Propyl) Phosphate (TDCPP)

 $C_9H_{15}Cl_6O_4P$



Summary of Health Effects

Tris (1,3-dichloro-2-propyl) phosphate (TDCPP) causes cancer in animals and may cause cancer in humans.

How is TDCPP used?

TDCPP is a common flame retardant in polyurethane foams in furniture.¹

Toxicity: What are its health effects?

TDCPP is considered a carcinogen by the state of California.²

TDCPP is metabolized (broken down) into other genotoxic and tumor-promoting compounds.³ In a two-year chronic exposure study on rats, TDCPP was found to significantly increase the incidence of malignant liver tumors.³

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

A person can come in contact with TDCPP by breathing in contaminated air and dust, swallowing dust, or from skin contact with consumer products. Children may also be exposed to TDCPP through hand-to-mouth contact with house dust or other surfaces.⁴

In a house dust survey of 50 homes in Boston, TDCPP was detected in 96% of the homes.¹ In San Francisco, 16 homes were tested in 2006 and again in 2011. TDCPP was detected in all of the homes in both years.⁵

The 2014 National Health and Nutrition Examination Survey (NHANES) report did not include data for TDCPP.

Other Information

Vermont has banned the use of TDCPP above 0.1% by weight in children's products and residential upholstered furniture.⁶

References

 Stapleton, H.M., Klosterhaus, S., Eagle, S., Fuh, J., Meeker, J.D., Blum, A., Webster, T.F. (2009). Detection of organophosphate flame retardants in furniture foam and U.S. house dust. *Environmental Science and Technology*, 43, 7490-7495. Retrieved from <u>www.ncbi.nlm.nih.gov/pubmed/19848166</u>



- California Environmental Protection Agency, Office of Environmental Health Hazard Assessment. List of chemicals known to the state to cause cancer or reproductive toxicity. Retrieved from oehha.ca.gov/proposition-65/proposition-65-list
- California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (2011). Evidence on the carcinogenicity of tris(1,3-dichloro-2-propyl) phosphate. Retrieved from oehha.ca.gov/media/downloads/proposition-65/chemicals/tdcpp070811.pdf
- 4. Agency for Toxic Substances and Disease Registry (2012). *ATSDR Toxicological profile for phosphate ester flame retardants*. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Services. Retrieved from www.atsdr.cdc.gov/toxprofiles/tp.asp?id=1119&tid=239
- 5. Dodson, R., Perovich, L.J., Covaci, A., Van den Eede, N., Ionas, A.C., Dirtu, A.C., Brody, J.G., Rudel, R.A. (2012). After the PBDE phase-out: a broad suite of flame retardants in repeat house dust samples from California. *Journal of Environmental Science & Technology*, 46, 13056-13066. Retrieved from www.ncbi.nlm.nih.gov/pubmed/23185960
- 6. Vermont General Assembly. Vermont Statutes Online. 9 V.S.A. Chapter 80 §2974. Retrieved from legislature.vermont.gov/statutes/fullchapter/09/080