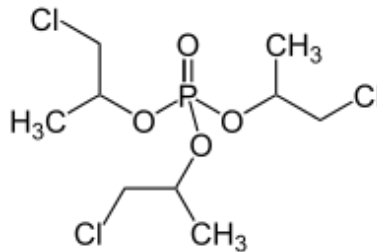


CAS 13674-84-5

Tris(1-chloro-2-propyl) phosphate (TCPP)

$C_9H_{18}Cl_3O_4P$



Summary of Health Effects

TCPP may harm development or the reproductive system, based on animal studies.

How is TCPP used?

TCPP is used in rigid polyurethane foam and furniture foam, textiles, leather, electronics and building construction laminates as an additive flame retardant.¹ TCPP has been found in furniture and baby products such as nursing pillows, portable mattresses, car seats, seat positioners and changing table pads.^{1,2} A mixture of TCPP isomers makes up commercial TCPP.³

Toxicity: What are its health effects?

TCPP is characterized by the U.S. Environmental Protection Agency (EPA) as a high hazard for developmental and reproductive toxicity based on a study of pregnant rats fed TCPP. Pregnant rats fed TCPP had reduced uterine weights, prolonged estrous cycles, and a greater number of runts in litters.⁴

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

A person may come in contact with TCPP by breathing in, eating, or skin contact with contaminated dust, drinking contaminated water, and from skin contact with consumer products containing TCPP.

TCPP has been frequently detected in residential dust in North America.^{2,5} Two metabolites have been detected in human urine via biomonitoring in the U.S.^{6,7,8} A study in Sweden detected TCPP in breast milk.⁹ A 2008 study detected TCPP in hand wash samples of factory workers in Finland.¹⁰ TCPP is readily absorbed and distributed throughout the body in rats.¹¹

TCPP has been characterized by the EPA as a high hazard for persistence based on biodegradation studies estimating TCPP to have a half-life of more than 60 days.⁴ A study detected TCPP in air, water and snow samples gathered in the North Atlantic and Arctic.¹² TCPP has also been detected in sea, surface, and drinking water, sewage effluent and indoor air from factories, offices and classrooms.^{11,13-17} A 2004 study detected TCPP in the indoor air of cars in Sweden.¹⁸ TCPP was detected in fruits such as pears and peaches in a 1995 study.¹⁹

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