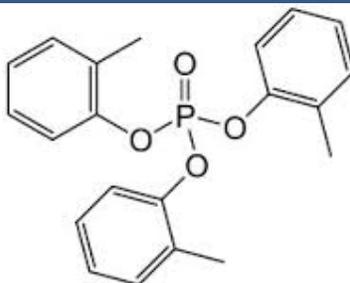


CAS 1330-78-5

Tricresyl phosphate (TCP)

C₂₁H₂₁O₄P



Summary of Health Effects

TCP may cause neurological damage and nervous system diseases, reduced fertility, and changes to the reproductive system, based on animal studies.

How is TCP used?

TCP has been used as a flame retardant in fabric, plastics and rubbers and as a plasticizer in polyvinyl chloride (PVC) and nitrocellulose materials, lacquers and varnishes. It is also used as a heat exchange medium and hydraulic fluid.^{1,2,3} A mixture of isomers makes up commercial TCP.⁴

Toxicity: What are its health effects?

According to the World Health Organization, there is no safe level of exposure to TCP.⁵ TCP has been shown to influence neurological damage in humans.^{5,6,7}

TCP is characterized by the U.S. Environmental Protection Agency (EPA) as a high hazard for reproductive toxicity based on studies of rodents fed TCP.² Adverse health effects included reduced fertility, sperm motility, number of live pups per litter, testicular and epididymal weights, and increased incidence of

interstitial cell hypertrophy and ovarian interstitial cell vacuolization.⁶

Ovarian and adrenal gland lesions occurred in rats, and liver and adrenal gland lesions in mice fed an isomer mixture of TCP for two years in a National Toxicology Program study.¹ Rodents fed TCP for 13 weeks developed neuropathy.^{2,6}

There are three tricresyl phosphate isomers, of which, the *ortho* isomer demonstrates the highest toxicity.⁸

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

A person may come in contact with TCP by breathing in contaminated air or dust, eating or drinking contaminated food or drink, or by skin contact with contaminated dust or consumer products containing TCP.

TCP was detected in all house dust samples gathered in two different North American studies.⁹ Biomonitoring studies detected TCP in the breast milk of women in Asia and Sweden.^{10,11} EPA has characterized TCP to exhibit moderate persistence in the environment based on biodegradation studies.²

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