

CAS 75-01-4

Substance name Vinyl chloride

Toxicity

Vinyl chloride is classified as a human carcinogen by authoritative sources.^{1,2,3} Evidence indicates that it causes liver and other cancers in occupationally exposed people and in test animals.¹ Vinyl chloride is considered mutagenic and genotoxic.¹ Young animals are particularly prone to the formation and persistence of vinyl chloride-induced adducts and are more likely than adults to develop tumors.⁴

Exposure

Vinyl chloride is used primarily to make polyvinyl chloride (PVC). Children's products such as bath toys, squeeze toys, and dolls are often made from PVC. PVC can be softened with plasticisers into the plastic commonly known as vinyl. Vinyl is used in numerous children's products including inflatable pools, inflatable play structures, play mats, clothing, mattress covers, and bibs. Chewing or sucking on these products has the potential to release any unpolymerized vinyl chloride from the object.⁴ We did not locate product testing data for vinyl chloride monomer from children's products.

References

1. WHO, International Agency for Research on Cancer. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume No 97: 1,3-Butadiene, Ethylene Oxide and Vinyl Halides (Vinyl Fluoride, Vinyl Chloride and Vinyl Bromide). 2008.
2. U.S.EPA, Integrated Risk Information System (IRIS). Vinyl Chloride (last revised 2000).
<http://www.epa.gov/iris/subst/1001.htm>.
3. U.S. DHHS, PHS, National Toxicology Program. Report on Carcinogens, Eleventh Edition. 2005.
<http://ntp.niehs.nih.gov/ntp/roc/eleventh/profiles/s186viny.pdf>.
4. US Department of Health and Human Services, Agency for Toxic Substances & Disease Registry. Toxicological Profile for Vinyl Chloride, 2006.
<http://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=282&tid=51>.