

CAS 110-80-5

Substance name Ethylene glycol monoethyl ether (also called 2-ethoxyethanol)

Toxicity

Ethylene glycol monoethyl ether is listed as a reproductive hazard by the state of California and the European Union.^{1,2} Consistent adverse effects on male reproductive organs and sperm have been observed in multiple species. These effects include testicular atrophy, degeneration of testicular tubules, decrease in sperm counts and motility, and an increase in the number of abnormal sperm cells.³ Ethylene glycol monoethyl ether has been shown to affect fertility in both sexes of rodents and cause developmental effects.³ Hematotoxic effects, such as hemolytic anemia, have also been reported.³

Exposure

Ethylene glycol monoethyl ether is primarily used as a chemical intermediate in the chemical industry. It is also used as an industrial solvent for nitrocellulose, varnish removers, cleansing solutions, and dye baths. It has been used for the formulation of paints, lacquers, varnishes and printing inks.^{3,4} Its use as a solvent in cleaning agents and cosmetics may have been phased out in Europe due to concerns about reproductive toxicity.³ Testing by the Danish EPA found it in marker pen sets, the coatings of wooden toys, and children's tents.⁵

References

1. California Office of Environmental Health Hazard Assessment. List of Chemicals Known to the State to Cause Cancer or Reproductive Toxicity. Feb 5, 2010.
http://www.oehha.org/prop65/prop65_list/files/P65single020510.pdf.
2. European Commission, Joint Research Centre, Institute for Health and Consumer Protection. European Chemical Substances Information System for Ethylene glycol monoethyl ether. Accessed online May 2010. <http://ecb.jrc.ec.europa.eu/esis/>.
3. European Commission Joint Research Centre: Institute for Health and Consumer Protection, ORATS. European Union Risk Assessment Report for 2-Ethoxyethanol (CAS# 110-80-5) Draft December 2007 and Draft Human Health Risk Assessment, October 2008.
http://ecb.jrc.ec.europa.eu/DOCUMENTS/Existing-Chemicals/RISK_ASSESSMENT/REPORT/2ethoxyethanolreport066.pdf
4. National Institutes of Health, National Library of Medicine Hazardous Substances Data Bank
<http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB> Accessed May 2010.
5. Danish Ministry of the Environment, Environmental Protection Agency. Surveys on Chemicals in Consumer Products. Report 93, 60, and 46.
http://www.mst.dk/English/Chemicals/Consumer_Products/Surveys-on-chemicals-in-consumer-products.htm