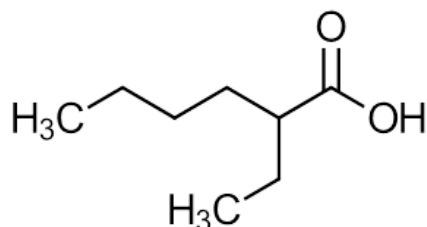


CAS 149-57-5

2-Ethylhexanoic Acid (2-EHA)

$C_8H_{16}O_2$



Summary of Health Effects

2-Ethylhexanoic Acid (2-EHA) affects the reproductive system of animals and may affect how babies develop.

How is 2-EHA used?

2-EHA is used to make lubricants, detergents and polyvinyl chloride (PVC).¹

Toxicity: What are its health effects?

The National Toxicology Program concluded that there is sufficient animal evidence that 2-EHA is a developmental toxicant.²

A 90-day sub-chronic study observed that when pregnant rats were exposed to high doses, there were increases in incidences of skeletal and visceral variations in fetuses.³ The same study found that maternal toxicity (abortion of fetus) occurred in pregnant rabbits that were exposed to 125 milligrams per kilogram per day.³

The Global Harmonized Classification for Labeling (GHS) categorized 2-EHA as a category 2 reproductive toxicant.⁴

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

A person can come in contact with 2-EHA by breathing in contaminated air, eating contaminated food, drinking contaminated water, or from skin contact with consumer products.¹

The Danish Ministry of the Environment detected 2-EHA in some children's products, including wooden toys, baby products, hobby products, and mouthable plastic toys.^{5,6} The Hazardous Substance Database reports that 2-EHA and its derivatives are used in the manufacture of lubricants and detergents.¹

The 2014 National Health and Nutrition Examination Survey (NHANES) report did not include data for 2-EHA.

References

1. National Library of Medicine (2008). *Hazardous substances data bank (HSDB) for 2-ethylhexanoic acid*. Retrieved November 9, 2018, from toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
2. U.S. Department of Health and Human Services, National Toxicology Program, Center for the Evaluation of Risks to Human Reproduction (2006). Monograph on the potential human reproductive and developmental effects of Di (2-ethylhexyl) Phthalate. Retrieved from ntp.niehs.nih.gov/ntp/ohat/phthalates/dehp/dehp-monograph.pdf

3. Hendrickx, A.G., Peterson, P.E., Tyl, R.W., Fisher, L.C., Fosnight, L.J., Kubena, M.F., Vrbanic, M.A., Katz, G.V. (1993). Assessment of the developmental toxicity of 2-ethylhexanoic acid in rats and rabbits. *Fundamental Applied Toxicology*, 20, 199–209. Retrieved from [ncbi.nlm.nih.gov/pubmed/8449392?dopt=Abstract](https://pubmed.ncbi.nlm.nih.gov/8449392/?dopt=Abstract)
4. European Chemicals Agency. *2-Ethylhexanoic acid—Summary of classification and labelling*. Retrieved November 9, 2018, from echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/92323
5. Danish Ministry of the Environment, Environmental Protection Agency (2008). *Surveys on chemicals in consumer products, report 90*. Retrieved from www2.mst.dk/udgiv/publications/2008/978-87-7052-717-0/pdf/978-87-7052-718-7.pdf
6. Danish Ministry of the Environment, Environmental Protection Agency (2008). *Surveys on chemicals in consumer products, report 93*. Retrieved from www2.mst.dk/udgiv/publications/2008/978-87-7052-763-7/pdf/978-87-7052-764-4.pdf