

CAS 95-53-4

Substance name 2-Aminotoluene (also called *ortho*-toluidine)

Toxicity

2-Aminotoluene is classified as a carcinogen by authoritative sources.¹⁻⁴ Animal evidence includes bladder and liver cancers as well as tumors in various tissues. Studies of exposed workers have reported that 2-aminotoluene and 2-aminotoluene hydrochloride exposure are associated with increased bladder cancer in humans. Definitive conclusions are limited by the fact that workers were almost always exposed to multiple chemicals including other possible bladder carcinogens.^{1,2}

Exposure

2-Aminotoluene and its hydrochloride salt are primarily used as chemical intermediates in making over 90 dyes and pigments. They are used in acid-fast dyestuffs, azo pigment dyes, sulfur dyes, indigo compounds, and optical brighteners. 2-Aminotoluene is also used as an intermediate for synthetic rubber and rubber vulcanizing chemicals, pharmaceuticals, and pesticides.^{1,2,5} Studies by the Danish EPA detected this compound in 1 out of 4 balloon samples, in infant mittens, and in wool fabric. The source of residues may be synthetic rubber and dyes used in fabrics.⁶

References

1. International Agency for Research on Cancer (IARC). IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 77, Some Industrial Chemicals. Chapter on *ortho*-Toluidine. 2000.
2. National Toxicology Program, Report on Carcinogens, Eleventh Edition, Substance file for “*o*-Toluidine and *o*-Toluidine Hydrochloride CAS No. 95-53-4 and 636-21-5.” Accessed online February 2010.
3. California Office of Environmental Human Hazard Assessment. OEHHA Cancer Potency Values. June 18, 2009. <http://oehha.ca.gov/risk/pdf/TCDBcas061809.pdf>.
4. American Conference of Governmental Industrial Hygienists (ACGIH). *o*-Toluidine in Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents, 2008.
5. 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.
6. Danish Ministry of the Environment, Environmental Protection Agency. Survey of Chemical Substances in Consumer Products. http://www.mst.dk/English/Chemicals/Consumer_Products/Surveys-on-chemicals-in-consumer-products.htm.