CAS 7440-36-0

Substance name Antimony & Antimony compounds

Toxicity

Antimony trioxide is classified as a carcinogen by authorative sources.[1-4] The listings are based on experimental evidence that demonstrates induction of lung tumors in rats following inhalation of antimony trioxide. There are supportive human data which show an excess of mortality from lung cancer among antimony workers, but these data are not considered conclusive.[2,3,5]

Exposure

Antimony trioxide (ATO) is used as catalyst in the manufacture of polyester fabrics and polyethylene terephthalate **(**PET) plastics and is used as a synergist to flame retardants in textiles, plastics, paints, adhesives and sealants. Antimony compounds are also used in the manufacture of pigments, paints, glass, pottery, and enamels. Antimony is common at low percentages in metal alloys.[6]

The Danish Environmental Protection Agency (DEPA) detected antimony in their tests of many children's products including perambulator covers, pencil cases, school bags, glitter glue, natural toys, mattress pads and fabric samples such as polyester clothing.[7] Antimony was found in a DEPA survey of jewelry that included children's jewelry.[7] Biomonitoring in general U.S. population reported widespread detections in people. Children appear to have higher body burdens than adults.[8]

References

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3. American Conference of Governmental Industrial Hygienists TLVs and BEIs. Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices. Cincinnati, OH, 2008, p. 12.
4. European Commission Regulation on Classification, Labeling and Packaging. 2009. CLP-Regulation (EC) No 1272/2008: Annex VI, Table 3.1. http://ec.europa.eu/enterprise/reach/ghs/legislation/index_en.htm .
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6. 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.
7. Danish Ministry of the Environment, Environmental Protection Agency. Surveys on Chemicals in consumer products. Reports 23, 58, 67, 84, 90, 93and 94. http://www.mst.dk/English/Chemicals/Consumer_Products/Surveys-on-chemicals-in-consumer-products.htm
8. Centers for Disease Control and Prevention (CDC), Fourth National Report on Human Exposure to Environmental Chemicals, December 2009. http://www.cdc.gov/exposurereport/data_tables/.