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SECONDARY VALUES FOR MOLYBDENUM (CAS No. 7439-98-7)

A search was conducted for information on the chemical properties and toxicity of molybdenum to human health and to fish and aquatic life using the following databases and search engines: ECOTOX (toxicity to fish and aquatic life), IRIS (Integrated Risk Information System; toxicity to human health), and CHEMFATE (environmental fate).

Fish and Aquatic Life Secondary Values

Thirteen records were found for molybdenum in the ECOTOX database. However, while toxicity data are available for rainbow trout (LC50 values of 800,000 µg/L and 1,320,000 µg/L), no toxicity data are available for a Daphnid species. Therefore, at this time, it is not possible to calculate acute or chronic secondary values for molybdenum.

Human Health Secondary Values

To calculate a criteria or secondary value for the protection of human health, it is first necessary to determine if the substance has been shown to be carcinogenic (which will result in the calculation of a human cancer criteria or secondary value) or not (which will result in the calculation of a human threshold criteria or secondary value). Molybdenum has not yet been classified as to its carcinogenicity by the U.S. EPA (IRIS, 2004). An oral reference dose (RfD; IRIS, 2004) is available, but it is not possible to calculate a human threshold secondary value for molybdenum because no measured BAF or BCF is available. A BAF can be calculated from a K_{ow} and a food chain multiplier for an organic substance, but not for an inorganic substance.