

**Nickel and compounds**  
**Ni**  
**[CAS No. 7440-02-0]**  
**Reproductive toxicant: Group 3**

There are no case reports or epidemiological studies in humans that have shown clear evidence of a correlation between occupational exposure to nickel and adverse effects on pregnancy, although several human studies have been reported<sup>1-6)</sup>. On the other hand, one animal study reported the reproductive toxicity of nickel in rats; in that study, nickel chloride was given by gavage, and adverse effects including increased frequency of perinatal death were observed along with maternal toxicity<sup>7)</sup>. Based on this evidence, nickel is classified as a Group 3 reproductive toxicant.

**References**

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- 2) Agency for Toxic Substances and Disease Registry (ATSDR). Toxicological profile for nickel. U.S. Department of Health and Human Services, Public Health Service. August 2005.
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- 4) Vaktskjold A, Talykova LV, Chashchin VP, et al. Small-for-gestational-age newborn of female refinery workers exposed to nickel. *Int J Occup Med Environ Health* 2007; 20: 327–38.
- 5) Vaktskjold A, Talykova LV, Chashchin VP, et al. Spontaneous abortions among nickel-exposed female refinery workers. *Int J Environ Health Res* 2008; 18: 99–115.
- 6) Vaktskjold A, Talykova LV, Chashchin VP, et al. Maternal nickel exposure and congenital musculoskeletal defects. *Am J Ind Med* 2008; 51: 825–33.
- 7) Smith MK, Gorge EL, Stober JA, et al. Perinatal toxicity associated with nickel chloride exposure. *Environ Res* 1993; 61: 200–11.