

Naphthols or counterparts or halogenated derivatives thereof

Definition of causal agent

Naphthols (hydroxynaphthalenes) are derivatives of naphthalene. The most important are the isomers α -naphthol (naphthalen-1-ol) and β -naphthol (naphthalen-2-ol).

α -naphthol forms colourless, sublimable crystals with phenolic odour, which darkens by light (melting point 96 °C). β -naphthol is crystalline (melting point 122.5 °C) with a white to yellowish-white colour and slight phenolic odour. Halogenated derivatives are chloro- and bromonaphthols.

Main occupational uses and sources of exposure:

Naphthols are used as intermediates for organic synthesis; manufacture of dye stuffs, rubber and others. In the past β -naphthol has been used as an antiseptic.

Toxic effects

The naphthols are considered to be more toxic than naphthalene, β -naphthol being slightly less toxic than the α -naphthol. Naphthol may be absorbed through the skin.

1. Local effects

Irritant effects

Naphthols are dermal irritants, they irritate the eyes. See section on *Occupationally caused irritation of the skin and mucous membranes* in Annex I entry nr. 202.

2. Systemic effects

Acute

Headache, nausea, vomiting, abdominal pain, injury of liver and kidney and symptoms of central nervous system (unconsciousness, convulsion) are described after oral ingestion. Occupational poisoning has occurred after inhalation of β -naphthol dust. In children treatments with ointments containing 2 % β -naphthol caused fatalities.

Exposure criteria:

Minimum intensity of exposure: occupational exposure confirmed, if possible assessed, by:

History and study of working conditions providing evidence of particularly intense exposure to these substances, especially by skin contact.

Minimum duration of exposure: Unknown

Maximum latent period: Unknown

☐ Chronic

Chronic inhalation exposure or prolonged skin contact may lead to slight or moderate effects on organs such as the liver and kidneys. Injury to the cornea and lens of the eyes has been described.

Exposure criteria:

Occupational exposure confirmed, if possible assessed, by:

History and study of working conditions providing evidence of particularly intense exposure to these substances, especially prolonged or repeated skin contact.

Minimum duration of exposure: Unknown

Maximum latent period: Unknown