

# Tert-butylhydroperoxide

CAS number: 75-91-2

MF: C<sub>4</sub>H<sub>10</sub>O<sub>2</sub>

MW: 90.1

Soluble in water and in various organic solvents.

## Major uses

Tert-butylhydroperoxide (TBH) is used in chemical industry as an intermediate for the production of propylene oxide, epichlorohydrin, butyl alcohol, polyesters, plastics, rubber, elastomers and other products. Generally, TBH is used to introduce peroxy group into organic molecules, in radical substitution reactions and in oxidation process [1].

## Human toxicity

TBH is an organic peroxide and therefore very reactive chemical. It is strong irritating in contact with eyes and skin. Inhalation of TBH may cause cough, even respiration paralysis [2].

Acute human toxicity data are not available.

## Kinetic data

No data available.

## Metabolism and excretion

No data available.

## Toxicological mechanisms

TBH is reacting with many compounds in the body. It was suggested that TBH is an inducer of lipidperoxidation, which consequently leads to cell damaging effect. Glutathione reduction in human erythrocytes by TBH was also reported [2].

## References

1. RTECS – Registry of Toxic Effects of Chemical Substances (1999).
2. Poisindex, Thomson Micromedex, Inc., V. 97. 1998.

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