

**1,2-Dimethoxyethan
(CAS-NN.: 110-71-4)**

Mutagenicity:

EGDME was negative in two Ames-Tests with *S. typhimurium* TA 98 and TA 100, respectively, in the presence of S9-mix. There are no tests results from in vivo experiments. According to the EC classification criteria there is no classification warranted (M: -).

Carcinogenicity:

There are no data available for this endpoint; therefore according to the EC classification criteria there is no classification possible (C: -).

Reproductive Toxicity/Fertility:

There is only one publication dealing with fertility aspects of EGDME [Nagano et al., 1984].

Male Mice gavage 0; 250; 500; 1000 mg/kg bw/d, 5 d/w, 5 w

(JCL-ICR) dose-dependent decrease of relative testes weight (% of bw) starting already at lowest dose (0,6 %; bei 1000 mg/kg: 0,2 %; control: ca. 0,8 %); dose-related atrophy of the seminiferous epithelium; highly dosed males showed a slight decrease in combined weight of seminal vesicles and coagulating gland

There are already clear adverse effects at the testes of mice after dosing with 250 mg/kg bw/d. Since the substance was applied by gavage it has to be taken into account that the severeness of the effects might in part be due to the bolus application. Furthermore there is no direct experimental evidence for a reduced fertility of male mice. Therefore according to the EC classification criteria classification in category 3 (R_F: 3) seems to be appropriate.

Reproductive Toxicity/Development:

There are several teratology studies available on rats and mice.

SD rats	gavage g.d. 8-18 sacrifice gd 19 or after delivery	0; 30; 60; 120; 250; 500; 1000 mg/kg bw/d Maternal Toxicity: 30 mg/kg/d NOEL 60 mg/kg/d NOAEL 120 mg/kg/d decreased bw gain (perhaps due to 100% fetal resorption) 250 and 500 mg/kg/d weight loss 1000 mg/kg/d weight loss, nasal and rectal bleeding, mortality 4/6 (66 %) Fetal Effects: 30 mg/kg/d NOAEL 60 mg/kg/d fetotoxicity (edema, delayed ossification, reduced growth (by 7 % versus control) 120 mg/kg/d and above: 100 % fetal resorption	[Leonhardt]
Mice (JCL-ICR)	gavage gd. 7-10 sacrifice gd 18	0; 250; 350; 490 mg/kg bw/d Maternal Toxicity: no significant maternal toxicity (NOEL 490 mg/kg bw/d) Fetal Effects: 250 mg/kg/d and above: delayed ossification, increased incidence of skeletal variations and malformations 350 mg/kg/d and above: increased number of gross abnormalities (exencephaly, caudal defects, umbilical hernia 490 mg/kg/d increased rate of fetal death (20 %)	[Nagano et al., 1984].
Mice (CD-1)	gavage g.d. 11 sacrifice: gd 18	0; 361 mg/kg bw/d Maternal Toxicity: no significant maternal toxicity (NOEL 361 mg/kg bw/d) Fetal Effects: 361 mg/kg/d: significantly reduced fetal weights; paw defects in 33.8 % of feti (86.7 % of litters)	[Hardin & Eisenmann, 1987]

In summary there is experimental evidence for foetotoxic and teratogenic effects of the substance in rats and mice even in the absence of maternal toxicity. Therefore according to the EC classification criteria classification in category 2 (R_E: 2) is warranted.

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