

Trichloroethylene
C₂HCl₃
[CAS No. 79-01-6]
Reproductive toxicant: Group 3

There are no case reports or epidemiological studies that have clearly shown a positive correlation between occupational exposure to trichloroethylene (TCE) and adverse effects on pregnancy. An animal study investigating the effects of TCE on reproduction and fertility in mice using the RACB protocol demonstrated that TCE exposure via diet produced hepatic and renal toxicity and reduced sperm motility in F0 and F1 mice¹). Another animal study observed the effects of TCE on fetal maturation by inhalation exposure in rats as suggested by reduced fetal weight and by skeletal malformations²). On the other hand, some animal studies reported that clear reproductive toxicities were not shown in rats as a result of dietary exposure with the RACB protocol³) or maternal inhalation exposure⁴).

Based on this evidence, trichloroethylene is classified as a Group 3 reproductive toxicant.

References

- 1) U.S. NTP, National Toxicology Program (1985). Trichloroethylene: Reproduction and fertility assessment in CD-1 mice when administered in feed. NTP-86-068, U.S. Department of Health and Human Services, National Institutes of Health, Bethesda.
- 2) Healy TEJ, Poole TR, Hopper A. Rat fetal development and maternal exposure to trichloroethylene 100 parts-per-million. *Brit J Anaesth* 1982; 54: 337–42.
- 3) U.S. NTP, National Toxicology Program (1986). Trichloroethylene: Reproduction and fertility assessment in F344 rats when administered in the feed. NTP-86-085. U.S. Department of Health and Human Services, National Institutes of Health, Bethesda.
- 4) Dorfmueller MA, Henne SP, York RG, et al. Evaluation of teratogenicity and behavioral toxicity with inhalation exposure of maternal rats to trichloroethylene. *Toxicology* 1979; 14: 153–66.