

***N,N*-Dimethylformamide**
C₃H₇NO
[CAS No. 68-12-2]
Reproductive toxicant: Group 2

There are no case reports or epidemiological studies in humans that have clearly shown a positive correlation between occupational exposure to *N,N*-dimethylformamide (DMF) and adverse effects on pregnancy¹. However, many animal studies, by inhalation and dermal exposure as well as by gavage administration, have shown clear evidence of the fetotoxicity and developmental effects of DMF, including fetal malformation and death in rats and in rabbits². Furthermore, chronic exposure to DMF in drinking

water reduced fertility rates in mice³. Based on this evidence, DMF is classified as a Group 2 reproductive toxicant.

References

- 1) Farquharson RG, Hall MH, Fullerton WT. Poor obstetric outcome in three quality control laboratory workers. *Lancet* 1983; 321: 983–4.
- 2) Hellwig J, Merkle J, Klimish HJ, et al. Studies on the prenatal toxicity of *N,N*-dimethylformamide in mice, rats and rabbits. *Food Chem Toxicol* 1991; 29: 193–201.
- 3) Fail PA, George JD, Grizzle TB, et al. Formamide and dimethylformamide: Reproductive assessment by continuous breeding in mice. *Reprod Toxicol* 1998; 12: 317–32.