Ethylene glycol monomethyl ether  
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\text{CH}_3\text{OCH}_2\text{CH}_2\text{OH}
\]
[CAS No. 109-86-4]  
Reproductive toxicant: Group 1

Many epidemiology studies have shown a positive association between occupational exposure to ethylene glycol monomethyl ether (EGME) and adverse effects on reproduction and/or development. Increased mental retardation, deformity, and chromosomal aberration rates were reported among infants of female EGME-exposed workers\(^1\). Significantly increased spontaneous abortion and subfertility rates were reported among female workers exposed to a mixture of glycol ethers at high concentrations\(^2\). The odds ratios of the neural tube defect, cleft lip, and double congenital anomalies associated with exposure to glycol ethers significantly rose in a case-control study of congenital anomalies\(^3\). An increase in oligospermia and azoospermia\(^4\), as well as a tendency to microrchidia\(^5\), was found in male workers with exposure to glycol ethers. Many animal studies have shown reproductive effects including testicular atrophy\(^6\), a decrease in fertility\(^7\), embryotoxicity\(^8,9\), and teratogenicity\(^8,9\). Based on this evidence, EGME is classified as a Group 1 reproductive toxicant.

References