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6148. Methyl Ether.

☐ Oxybismethane; ☐ dimethyl ether.

☐ C_2H_6O ; ☐ mol wt 46.07.

☐ C 52.14%, H 13.13%, O 34.73%. ☐ CH_3OCH_3 .

☐ Prepn: J. Dumas, E. Peligot, Ann. 15, 1 (1835); and thermal properties: R. M. Kennedy et al., J. Am. Chem. Soc. 63, 2267 (1941).

Atmospheric chemistry: S. M. Japar et al., Int. J. Chem. Kinet. 22, 1257 (1990).

Review: H. Hover in Ullmann's Encyclopedia of Industrial Chemistry vol. A8 (VCH, Weinheim, 1987) pp 541-544; of use in diesel engines:

A. M. Rouhi, Chem. Eng. News 73, 37- 39 (May 29, 1995).

☐ Colorless, flammable gas with a slight ethereal odor.

mp -141.50 deg.

bp -24.82 deg.

d₂₅ (1 atm) 1.91855 g/l.

Heat capacity at 210.51 degK: 23.88 cal/deg/mole.

Heat of vaporization at bp: 5141.0 cal/mole.

Heat of fusion: 1179.8 cal/mole.

Flash pt -41 deg.

One vol water takes up 37 vols gas.

☐ USE: Aerosol propellant; alternative diesel fuel; chemical intermediate.