# Carbamodithioic acid, dimethyl-, methyl ester

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|---|---|
| **Other names:** | Carbamic acid, dimethyldithio-, methyl ester |
| | Cystogon |
| | Forbiat |
| | Methyl dimethyldithiocarbamate |
| | Methyl N,N-dimethyldithiocarbamate |
| | Dimethyldithiocarbamic acid methyl ester |
| **Inchi:** | InChI=1S/C4H9NS2/c1-5(2)4(6)7-3/h1-3H3 |
| **InchiKey:** | NBBZMDUHKWRYSZ-UHFFFAOYSA-N |
| **Formula:** | C4H9NS2 |
| **SMILES:** | CSC(=S)N(C)C |
| **Mol. weight [g/mol]:** | 135.25 |
| **CAS:** | 3735-92-0 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| chs | -3991.00 | kJ/mol | NIST Webbook |
| gf | 243.76 | kJ/mol | Joback Method |
| hf | 130.01 | kJ/mol | Joback Method |
| hfs | -66.90 | kJ/mol | NIST Webbook |
| hfus | 17.87 | kJ/mol | Joback Method |
| hvap | 40.09 | kJ/mol | Joback Method |
| ie | 8.01 | eV | NIST Webbook |
| ie | 8.01 ± 0.03 | eV | NIST Webbook |
| log10ws | -1.30 | | Crippen Method |
| logp | 1.196 | | Crippen Method |
| mcvol | 105.600 | ml/mol | McGowan Method |
| pc | 4474.22 | kPa | Joback Method |
| rinpol | 1082.00 | | NIST Webbook |
| rinpol | 1082.00 | | NIST Webbook |
| ripol | 2012.00 | | NIST Webbook |
| ripol | 2012.00 | | NIST Webbook |
| tb | 442.18 | K | Joback Method |
| tc | 663.52 | K | Joback Method |
| tf | 235.98 | K | Joback Method |
| vc | 0.367 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 189.92 | J/mol×K | 442.18 | Joback Method |
| cpg | 199.76 | J/mol×K | 479.07 | Joback Method |
| cpg | 208.90 | J/mol×K | 515.96 | Joback Method |
| cpg | 217.38 | J/mol×K | 552.85 | Joback Method |
| cpg | 225.25 | J/mol×K | 589.74 | Joback Method |
| cpg | 232.56 | J/mol×K | 626.63 | Joback Method |
| cpg | 239.35 | J/mol×K | 663.52 | Joback Method |

# Sources

**Crippen Method:** https://www.chemeo.com/doc/models/crippen_log10ws
**Joback Method:** https://en.wikipedia.org/wiki/Joback_method
**McGowan Method:** http://link.springer.com/article/10.1007/BF02311772
**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C3735920&Units=SI
**Crippen Method:** http://pubs.acs.org/doi/abs/10.1021/ci990307l

# Legend

**chs:** Standard solid enthalpy of combustion
**cpg:** Ideal gas heat capacity
**gf:** Standard Gibbs free energy of formation
**hf:** Enthalpy of formation at standard conditions
**hfs:** Solid phase enthalpy of formation at standard conditions
**hfus:** Enthalpy of fusion at standard conditions
**hvap:** Enthalpy of vaporization at standard conditions
**ie:** Ionization energy
**log10ws:** Log10 of Water solubility in mol/l
**logp:** Octanol/Water partition coefficient
**mcvol:** McGowan's characteristic volume
**pc:** Critical Pressure
**rinpol:** Non-polar retention indices
**ripol:** Polar retention indices
**tb:** Normal Boiling Point Temperature

| | |
|---|---|
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |