# 2-Nonen-4-one

**Other names:** Non-2-en-4-one
2-Nonenone-4
**Inchi:** InChI=1S/C9H16O/c1-3-5-6-8-9(10)7-4-2/h4,7H,3,5-6,8H2,1-2H3/b7-4+
**InchiKey:** WTAYWTBOEQYGOG-QPJJXVBHSA-N
**Formula:** C9H16O
**SMILES:** CC=CC(=O)CCCCC
**Mol. weight [g/mol]:** 140.22
**CAS:** 32064-72-5

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -23.80 | kJ/mol | Joback Method |
| hf | -224.45 | kJ/mol | Joback Method |
| hfus | 20.87 | kJ/mol | Joback Method |
| hvap | 42.33 | kJ/mol | Joback Method |
| log10ws | -2.72 | | Crippen Method |
| logp | 2.712 | | Crippen Method |
| mcvol | 134.940 | ml/mol | McGowan Method |
| pc | 2584.59 | kPa | Joback Method |
| rinpol | 1127.80 | | NIST Webbook |
| rinpol | 1132.00 | | NIST Webbook |
| rinpol | 1121.00 | | NIST Webbook |
| rinpol | 1140.00 | | NIST Webbook |
| rinpol | 1121.00 | | NIST Webbook |
| rinpol | 1127.80 | | NIST Webbook |
| rinpol | 1140.00 | | NIST Webbook |
| ripol | 1489.00 | | NIST Webbook |
| ripol | 1489.00 | | NIST Webbook |
| ripol | 1466.00 | | NIST Webbook |
| ripol | 1470.00 | | NIST Webbook |
| ripol | 1452.00 | | NIST Webbook |
| ripol | 1470.00 | | NIST Webbook |
| ripol | 1466.00 | | NIST Webbook |
| tb | 463.35 | K | Joback Method |
| tc | 645.65 | K | Joback Method |
| tf | 236.04 | K | Joback Method |
| vc | 0.525 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 281.50 | J/mol×K | 463.35 | Joback Method |
| cpg | 294.71 | J/mol×K | 493.73 | Joback Method |
| cpg | 307.32 | J/mol×K | 524.12 | Joback Method |
| cpg | 319.33 | J/mol×K | 554.50 | Joback Method |
| cpg | 330.78 | J/mol×K | 584.89 | Joback Method |
| cpg | 341.68 | J/mol×K | 615.27 | Joback Method |
| cpg | 352.05 | J/mol×K | 645.65 | Joback Method |
| dvisc | 0.0041736 | Pa×s | 236.04 | Joback Method |
| dvisc | 0.0018590 | Pa×s | 273.93 | Joback Method |
| dvisc | 0.0010078 | Pa×s | 311.81 | Joback Method |
| dvisc | 0.0006239 | Pa×s | 349.69 | Joback Method |
| dvisc | 0.0004242 | Pa×s | 387.58 | Joback Method |
| dvisc | 0.0003089 | Pa×s | 425.47 | Joback Method |
| dvisc | 0.0002369 | Pa×s | 463.35 | 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=C32064725&Units=SI
**Crippen Method:** http://pubs.acs.org/doi/abs/10.1021/ci990307l

# Legend

**cpg:** Ideal gas heat capacity
**dvisc:** Dynamic viscosity
**gf:** Standard Gibbs free energy of formation
**hf:** Enthalpy of formation at standard conditions
**hfus:** Enthalpy of fusion at standard conditions
**hvap:** Enthalpy of vaporization at standard conditions

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|---|---|
| **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 |