# 4-Decenal, (E)-

**Other names:** (E)-4-Decenal
4(E)-Decenal
**Inchi:** InChI=1S/C10H18O/c1-2-3-4-5-6-7-8-9-10-11/h6-7,10H,2-5,8-9H2,1H3/b7-6+
**InchiKey:** CWRKZMLUDFBPAO-VOTSOKGWSA-N
**Formula:** C10H18O
**SMILES:** CCCCCC=CCCC=O
**Mol. weight [g/mol]:** 154.25
**CAS:** 65405-70-1

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 14.02 | kJ/mol | Joback Method |
| hf | -218.09 | kJ/mol | Joback Method |
| hfus | 24.15 | kJ/mol | Joback Method |
| hvap | 60.00 | kJ/mol | NIST Webbook |
| log10ws | -3.14 | | Crippen Method |
| logp | 3.102 | | Crippen Method |
| mcvol | 149.030 | ml/mol | McGowan Method |
| pc | 2374.90 | kPa | Joback Method |
| rinpol | 1199.00 | | NIST Webbook |
| rinpol | 1200.00 | | NIST Webbook |
| rinpol | 1197.00 | | NIST Webbook |
| rinpol | 1200.00 | | NIST Webbook |
| ripol | 1545.00 | | NIST Webbook |
| tb | 481.02 | K | Joback Method |
| tc | 657.18 | K | Joback Method |
| tf | 239.38 | K | Joback Method |
| vc | 0.593 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 326.08 | J/mol×K | 481.02 | Joback Method |
| cpg | 388.96 | J/mol×K | 627.82 | Joback Method |

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|---|---|---|---|---|
| cpg | 377.54 | J/mol×K | 598.46 | Joback Method |
| cpg | 365.57 | J/mol×K | 569.10 | Joback Method |
| cpg | 353.02 | J/mol×K | 539.74 | Joback Method |
| cpg | 339.86 | J/mol×K | 510.38 | Joback Method |
| cpg | 399.85 | J/mol×K | 657.18 | Joback Method |
| dvisc | 0.0002437 | Pa×s | 481.02 | Joback Method |
| dvisc | 0.0003193 | Pa×s | 440.75 | Joback Method |
| dvisc | 0.0004415 | Pa×s | 400.47 | Joback Method |
| dvisc | 0.0006565 | Pa×s | 360.20 | Joback Method |
| dvisc | 0.0010787 | Pa×s | 319.93 | Joback Method |
| dvisc | 0.0020448 | Pa×s | 279.65 | Joback Method |
| dvisc | 0.0048073 | Pa×s | 239.38 | 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=C65405701&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
**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