# 1,trans-8-decadiene

**Inchi:** InChI=1S/C10H18/c1-3-5-7-9-10-8-6-4-2/h3-4,6H,1,5,7-10H2,2H3/b6-4+
**InchiKey:** GQRCDUBMGNBKOX-GQCTYLIASA-N
**Formula:** C10H18
**SMILES:** C=CCCCCCC=CC
**Mol. weight [g/mol]:** 138.25

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 201.38 | kJ/mol | Joback Method |
| hf | -7.08 | kJ/mol | Joback Method |
| hfus | 20.58 | kJ/mol | Joback Method |
| hvap | 37.14 | kJ/mol | Joback Method |
| log10ws | -3.72 | | Crippen Method |
| logp | 3.699 | | Crippen Method |
| mcvol | 143.160 | ml/mol | McGowan Method |
| pc | 2302.53 | kPa | Joback Method |
| rinpol | 977.10 | | NIST Webbook |
| tb | 429.04 | K | Joback Method |
| tc | 602.67 | K | Joback Method |
| tf | 195.62 | K | Joback Method |
| vc | 0.556 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 284.09 | J/mol×K | 429.04 | Joback Method |
| cpg | 298.55 | J/mol×K | 457.98 | Joback Method |
| cpg | 312.35 | J/mol×K | 486.92 | Joback Method |
| cpg | 325.53 | J/mol×K | 515.86 | Joback Method |
| cpg | 338.11 | J/mol×K | 544.80 | Joback Method |
| cpg | 350.10 | J/mol×K | 573.73 | Joback Method |
| cpg | 361.55 | J/mol×K | 602.67 | Joback Method |
| dvisc | 0.0049613 | Pa×s | 195.62 | Joback Method |
| dvisc | 0.0018503 | Pa×s | 234.52 | Joback Method |

| | | | | |
|---|---|---|---|---|
| dvisc | 0.0009137 | Pa×s | 273.43 | Joback Method |
| dvisc | 0.0005379 | Pa×s | 312.33 | Joback Method |
| dvisc | 0.0003561 | Pa×s | 351.23 | Joback Method |
| dvisc | 0.0002559 | Pa×s | 390.14 | Joback Method |
| dvisc | 0.0001953 | Pa×s | 429.04 | Joback Method |

# Sources

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|---|---|
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |
| **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=R249746&Units=SI |

# 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 |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |