# 1-Nonene, 8-methyl

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|---|---|
| **Other names:** | 8-Methylnon-1-ene |
| | 8-methyl-1-nonene |
| **Inchi:** | InChI=1S/C10H20/c1-4-5-6-7-8-9-10(2)3/h4,10H,1,5-9H2,2-3H3 |
| **InchiKey:** | DMFDIYIYBVPKNT-UHFFFAOYSA-N |
| **Formula:** | C10H20 |
| **SMILES:** | C=CCCCCCC(C)C |
| **Mol. weight [g/mol]:** | 140.27 |
| **CAS:** | 26741-24-2 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 118.72 | kJ/mol | Joback Method |
| hf | -129.58 | kJ/mol | Joback Method |
| hfus | 16.85 | kJ/mol | Joback Method |
| hvap | 36.80 | kJ/mol | Joback Method |
| log10ws | -3.62 | | Crippen Method |
| logp | 3.779 | | Crippen Method |
| mcvol | 147.460 | ml/mol | McGowan Method |
| pc | 2208.29 | kPa | Joback Method |
| rinpol | 955.00 | | NIST Webbook |
| rinpol | 954.00 | | NIST Webbook |
| rinpol | 954.00 | | NIST Webbook |
| tb | 424.44 | K | Joback Method |
| tc | 593.69 | K | Joback Method |
| tf | 185.70 | K | Joback Method |
| vc | 0.571 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 299.11 | J/mol×K | 424.44 | Joback Method |
| cpg | 314.13 | J/mol×K | 452.65 | Joback Method |
| cpg | 328.55 | J/mol×K | 480.86 | Joback Method |
| cpg | 342.39 | J/mol×K | 509.07 | Joback Method |

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|---|---|---|---|---|
| cpg | 355.67 | J/mol×K | 537.27 | Joback Method |
| cpg | 368.39 | J/mol×K | 565.48 | Joback Method |
| cpg | 380.58 | J/mol×K | 593.69 | Joback Method |
| dvisc | 0.0091831 | Pa×s | 185.70 | Joback Method |
| dvisc | 0.0028680 | Pa×s | 225.49 | Joback Method |
| dvisc | 0.0012699 | Pa×s | 265.28 | Joback Method |
| dvisc | 0.0006955 | Pa×s | 305.07 | Joback Method |
| dvisc | 0.0004376 | Pa×s | 344.86 | Joback Method |
| dvisc | 0.0003031 | Pa×s | 384.65 | Joback Method |
| dvisc | 0.0002249 | Pa×s | 424.44 | Joback Method |

# Correlations

| Information | Value |
|---|---|
| Property code | pvap |
| Equation | ln(Pvp) = A + B/(T + C) |
| Coeff. A | 1.57668e+01 |
| Coeff. B | -4.18612e+03 |
| Coeff. C | -6.44850e+01 |
| Temperature range (K), min. | 334.92 |
| Temperature range (K), max. | 464.87 |

# 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=R46986&Units=SI

**The Yaws Handbook of Vapor Pressure:** https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

**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

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|---|---|
| **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 |
| **pvap:** | Vapor pressure |
| **rinpol:** | Non-polar retention indices |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |