# 1-Nonatriacontene

**Inchi:** InChI=1S/C39H78/c1-3-5-7-9-11-13-15-17-19-21-23-25-27-29-31-33-35-37-39-38-36-34-
**InchiKey:** KNEBRZXNWZPYBZ-UHFFFAOYSA-N
**Formula:** C39H78
**SMILES:** C=CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
**Mol. weight [g/mol]:** 547.04
**CAS:** 61868-17-5

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 365.34 | kJ/mol | Joback Method |
| hf | -722.86 | kJ/mol | Joback Method |
| hfus | 95.49 | kJ/mol | Joback Method |
| hvap | 101.74 | kJ/mol | Joback Method |
| log10ws | -16.00 | | Crippen Method |
| logp | 15.236 | | Crippen Method |
| mcvol | 556.070 | ml/mol | McGowan Method |
| pc | 413.11 | kPa | Joback Method |
| rinpol | 2895.00 | | NIST Webbook |
| rinpol | 3890.00 | | NIST Webbook |
| rinpol | 3880.00 | | NIST Webbook |
| rinpol | 2895.00 | | NIST Webbook |
| tb | 1088.40 | K | Joback Method |
| tc | 1430.19 | K | Joback Method |
| tf | 527.53 | K | Joback Method |
| vc | 2.200 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 2073.52 | J/mol×K | 1088.40 | Joback Method |
| cpg | 2114.08 | J/mol×K | 1145.37 | Joback Method |
| cpg | 2151.37 | J/mol×K | 1202.33 | Joback Method |
| cpg | 2185.90 | J/mol×K | 1259.30 | Joback Method |
| cpg | 2218.20 | J/mol×K | 1316.26 | Joback Method |

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|---|---|---|---|---|
| cpg | 2248.79 | J/mol×K | 1373.23 | Joback Method |
| cpg | 2278.19 | J/mol×K | 1430.19 | Joback Method |
| dvisc | 0.0002930 | Pa×s | 527.53 | Joback Method |
| dvisc | 0.0000958 | Pa×s | 621.01 | Joback Method |
| dvisc | 0.0000420 | Pa×s | 714.49 | Joback Method |
| dvisc | 0.0000223 | Pa×s | 807.97 | Joback Method |
| dvisc | 0.0000135 | Pa×s | 901.44 | Joback Method |
| dvisc | 0.0000089 | Pa×s | 994.92 | Joback Method |
| dvisc | 0.0000064 | Pa×s | 1088.40 | Joback Method |

# Correlations

| Information | Value |
|---|---|
| Property code | pvap |
| Equation | ln(Pvp) = A + B/(T + C) |
| Coeff. A | 1.46684e+01 |
| Coeff. B | -6.45423e+03 |
| Coeff. C | -1.60812e+02 |
| Temperature range (K), min. | 609.62 |
| Temperature range (K), max. | 850.59 |

# Sources

| | |
|---|---|
| **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=R528128&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 |
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |

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