Nonane, 2,2-dimethyl

Other names: 2,2-dimethylnonane
Inchi: InChI=1S/C11H24/c1-5-6-7-8-9-10-11(2,3)4/h5-10H2,1-4H3
InchiKey: WDSBVMLUILIJOW-UHFFFAOYSA-N
Formula: C11H24
SMILES: CCCCCCCC(C)(C)C
Mol. weight [g/mol]: 156.31
CAS: 17302-14-6

Physical Properties

Property code	Value	Unit	Source
gf	44.58	kJ/mol	Joback Method
hf	-279.12	kJ/mol	Joback Method
hfus	16.83	kJ/mol	Joback Method
hvap	38.78	kJ/mol	Joback Method
log10ws	-4.19		Crippen Method
logp	4.393		Crippen Method
mcvol	165.850	ml/mol	McGowan Method
pc	1966.56	kPa	Joback Method
rinpol	1026.00		NIST Webbook
rinpol	1021.00		NIST Webbook
rinpol	1023.00		NIST Webbook
rinpol	1025.00		NIST Webbook
rinpol	1025.00		NIST Webbook
rinpol	1015.00		NIST Webbook
rinpol	1025.00		NIST Webbook
rinpol	1025.00		NIST Webbook
rinpol	1024.00		NIST Webbook
rinpol	1026.00		NIST Webbook
rinpol	1015.00		NIST Webbook
rinpol	1018.00		NIST Webbook
rinpol	1021.00		NIST Webbook
rinpol	1025.00		NIST Webbook
tb	447.85	K	Joback Method
tc	619.29	K	Joback Method
tf	216.15	K	Joback Method
vc	0.640	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	362.00	J/mol×K	447.85	Joback Method
cpg	379.36	J/mol×K	476.42	Joback Method
cpg	395.95	J/mol×K	505.00	Joback Method
cpg	411.80	J/mol×K	533.57	Joback Method
cpg	426.92	J/mol×K	562.14	Joback Method
cpg	441.36	J/mol×K	590.71	Joback Method
cpg	455.13	J/mol×K	619.29	Joback Method
dvisc	0.0103350	Pa×s	216.15	Joback Method
dvisc	0.0033968	Pa×s	254.77	Joback Method
dvisc	0.0014964	Pa×s	293.38	Joback Method
dvisc	0.0007977	Pa×s	332.00	Joback Method
dvisc	0.0004848	Pa×s	370.62	Joback Method
dvisc	0.0003237	Pa×s	409.23	Joback Method
dvisc	0.0002317	Pa×s	447.85	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.38705e+01
Coeff. B	-3.40203e+03
Coeff. C	-8.54500e+01
Temperature range (K), min.	335.91
Temperature range (K), max.	482.93

Sources

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=R71260&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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