Nonane, 2,5-dimethyl-

Other names: 2,5-Dimethylnonane
Inchi: InChI=1S/C11H24/c1-5-6-7-11(4)9-8-10(2)3/h10-11H,5-9H2,1-4H3
InchiKey: NQUMJENPNGXAIH-UHFFFAOYSA-N
Formula: C11H24
SMILES: CCCCC(C)CCC(C)C
Mol. weight [g/mol]: 156.31
CAS: 17302-27-1

Physical Properties

Property code	Value	Unit	Source
gf	36.86	kJ/mol	Joback Method
hf	-280.93	kJ/mol	Joback Method
hfus	17.20	kJ/mol	Joback Method
hvap	39.30	kJ/mol	Joback Method
log10ws	-3.94		Crippen Method
logp	4.249		Crippen Method
mcvol	165.850	ml/mol	McGowan Method
pc	1961.34	kPa	Joback Method
rinpol	1015.00		NIST Webbook
rinpol	1027.00		NIST Webbook
rinpol	1024.00		NIST Webbook
ripol	1059.00		NIST Webbook
tb	450.20	K	Joback Method
tc	618.81	K	Joback Method
tf	183.73	K	Joback Method
vc	0.639	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	360.12	J/mol×K	450.20	Joback Method
cpg	376.92	J/mol×K	478.30	Joback Method
cpg	393.08	J/mol×K	506.40	Joback Method
cpg	408.60	J/mol×K	534.51	Joback Method

cpg	423.51	J/mol×K	562.61	Joback Method
cpg	437.81	J/mol×K	590.71	Joback Method
cpg	451.53	J/mol×K	618.81	Joback Method
dvisc	0.0200727	Pa×s	183.73	Joback Method
dvisc	0.0044499	Pa×s	228.14	Joback Method
dvisc	0.0016118	Pa×s	272.55	Joback Method
dvisc	0.0007760	Pa×s	316.96	Joback Method
dvisc	0.0004471	Pa×s	361.38	Joback Method
dvisc	0.0002907	Pa×s	405.79	Joback Method
dvisc	0.0002057	Pa×s	450.20	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.39977e+01
Coeff. B	-3.43943e+03
Coeff. C	-8.54500e+01
Temperature range (K), min.	336.32
Temperature range (K), max.	481.41

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=C17302271&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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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