

1,13-Tetradecadiene

Other names:	Tetradeca-1,13-diene Tetradecadiene-1,13
Inchi:	InChI=1S/C14H26/c1-3-5-7-9-11-13-14-12-10-8-6-4-2/h3-4H,1-2,5-14H2
InchiKey:	XMRSTLBCBDIKFI-UHFFFAOYSA-N
Formula:	C14H26
SMILES:	C=CCCCCCCCCCC=C
Mol. weight [g/mol]:	194.36
CAS:	21964-49-8

Physical Properties

Property code	Value	Unit	Source
gf	242.68	kJ/mol	Joback Method
hf	-81.43	kJ/mol	Joback Method
hfus	29.46	kJ/mol	Joback Method
hvap	45.42	kJ/mol	Joback Method
log10ws	-5.39		Crippen Method
logp	5.259		Crippen Method
mcvol	199.520	ml/mol	McGowan Method
pc	1628.54	kPa	Joback Method
rinpol	1385.00		NIST Webbook
rinpol	1385.00		NIST Webbook
rinpol	1380.00		NIST Webbook
rinpol	1385.00		NIST Webbook
rinpol	1373.00		NIST Webbook
tb	513.08	K	Joback Method
tc	678.02	K	Joback Method
tf	244.02	K	Joback Method
vc	0.781	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	467.41	J/molxK	513.08	Joback Method
cpg	484.63	J/molxK	540.57	Joback Method

cpg	501.14	J/molxK	568.06	Joback Method
cpg	516.95	J/molxK	595.55	Joback Method
cpg	532.09	J/molxK	623.04	Joback Method
cpg	546.59	J/molxK	650.53	Joback Method
cpg	560.46	J/molxK	678.02	Joback Method
dvisc	0.0047769	Paxs	244.02	Joback Method
dvisc	0.0018415	Paxs	288.86	Joback Method
dvisc	0.0009172	Paxs	333.71	Joback Method
dvisc	0.0005388	Paxs	378.55	Joback Method
dvisc	0.0003543	Paxs	423.39	Joback Method
dvisc	0.0002525	Paxs	468.24	Joback Method
dvisc	0.0001909	Paxs	513.08	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	404.20	K	2.30	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.65575e+01
Coeff. B	-5.18082e+03
Coeff. C	-9.00450e+01
Temperature range (K), min.	408.48
Temperature range (K), max.	550.73

Sources

McGowan Method:

<http://link.springer.com/article/10.1007/BF02311772>

NIST Webbook:

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C21964498&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/ci9903071>

Crippen Method:

https://www.chemeo.com/doc/models/crippen_log10ws

Joback Method:

https://en.wikipedia.org/wiki/Joback_method

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
mccvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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