

7-Tetradecene, (E)-

Other names:	(7E)-7-Tetradecene (E)-7-Tetradecene E-Tetradec-7-ene trans-7-tetradecene
Inchi:	InChI=1S/C14H28/c1-3-5-7-9-11-13-14-12-10-8-6-4-2/h13-14H,3-12H2,1-2H3/b14-13+
InchiKey:	UBDIXSAEHLOROW-BUHFOSPRSA-N
Formula:	C14H28
SMILES:	CCCCCCC=CCCCCCC
Mol. weight [g/mol]:	196.37
CAS:	41446-63-3

Physical Properties

Property code	Value	Unit	Source
gf	147.22	kJ/mol	Joback Method
hf	-215.07	kJ/mol	Joback Method
hfus	32.22	kJ/mol	Joback Method
hvap	46.72	kJ/mol	Joback Method
log10ws	-5.54		Crippen Method
logp	5.483		Crippen Method
mcvol	203.820	ml/mol	McGowan Method
pc	1587.28	kPa	Joback Method
rinpol	1384.00		NIST Webbook
rinpol	1374.00		NIST Webbook
rinpol	1374.00		NIST Webbook
rinpol	1383.00		NIST Webbook
rinpol	1396.00		NIST Webbook
rinpol	1374.00		NIST Webbook
rinpol	1374.00		NIST Webbook
rinpol	1373.60		NIST Webbook
rinpol	1376.00		NIST Webbook
rinpol	1376.00		NIST Webbook
rinpol	1396.00		NIST Webbook
ripol	1420.60		NIST Webbook
ripol	1427.00		NIST Webbook
ripol	1428.00		NIST Webbook
ripol	1428.00		NIST Webbook
ripol	1429.00		NIST Webbook

ripol	1430.00		NIST Webbook
ripol	1413.90		NIST Webbook
ripol	1421.70		NIST Webbook
ripol	1415.80		NIST Webbook
ripol	1422.30		NIST Webbook
ripol	1412.50		NIST Webbook
ripol	1415.80		NIST Webbook
ripol	1435.00		NIST Webbook
ripol	1421.50		NIST Webbook
ripol	1414.70		NIST Webbook
ripol	1434.00		NIST Webbook
ripol	1421.60		NIST Webbook
ripol	1423.00		NIST Webbook
ripol	1431.00		NIST Webbook
ripol	1432.00		NIST Webbook
ripol	1434.00		NIST Webbook
ripol	1435.00		NIST Webbook
ripol	1417.40		NIST Webbook
ripol	1422.00		NIST Webbook
ripol	1423.00		NIST Webbook
ripol	1434.00		NIST Webbook
ripol	1429.00		NIST Webbook
ripol	1422.30		NIST Webbook
ripol	1414.70		NIST Webbook
ripol	1432.00		NIST Webbook
ripol	1432.00		NIST Webbook
ripol	1432.00		NIST Webbook
ripol	1431.00		NIST Webbook
ripol	1421.00		NIST Webbook
ripol	1423.00		NIST Webbook
ripol	1422.00		NIST Webbook
ripol	1422.00		NIST Webbook
ripol	1417.00		NIST Webbook
ripol	1422.00		NIST Webbook
ripol	1416.00		NIST Webbook
ripol	1423.30		NIST Webbook
ripol	1423.50		NIST Webbook
ripol	1417.40		NIST Webbook
ripol	1421.00		NIST Webbook
ripol	1417.30		NIST Webbook
ripol	1422.00		NIST Webbook
tb	523.20	K	NIST Webbook
tc	689.82	K	Joback Method
tf	242.46	K	Joback Method

vc

0.799

m3/kmol

Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	488.90	J/molxK	523.88	Joback Method
cpg	506.77	J/molxK	551.54	Joback Method
cpg	523.90	J/molxK	579.19	Joback Method
cpg	540.31	J/molxK	606.85	Joback Method
cpg	556.03	J/molxK	634.51	Joback Method
cpg	571.08	J/molxK	662.16	Joback Method
cpg	585.50	J/molxK	689.82	Joback Method
dvisc	0.0054364	Paxs	242.46	Joback Method
dvisc	0.0018593	Paxs	289.36	Joback Method
dvisc	0.0008577	Paxs	336.27	Joback Method
dvisc	0.0004782	Paxs	383.17	Joback Method
dvisc	0.0003029	Paxs	430.07	Joback Method
dvisc	0.0002098	Paxs	476.98	Joback Method
dvisc	0.0001553	Paxs	523.88	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.51593e+01
Coeff. B	-4.60182e+03
Coeff. C	-8.65860e+01
Temperature range (K), min.	396.02
Temperature range (K), max.	553.88

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=C41446633&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

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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