Tetradecane, 1-chloro-

Other names:	1-Chlorotetradecane
	Myristyl chloride
	Tetradecyl chloride
	n-Tetradecyl chloride
Inchi:	InChI=1S/C14H29Cl/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-15/h2-14H2,1H3
InchiKey:	RNHWYOLIEJIAMV-UHFFFAOYSA-N
Formula:	C14H29Cl
SMILES:	CCCCCCCCCCCCCCCl
Mol. weight [g/mol]:	232.83
CAS:	2425-54-9

Physical Properties

Property code	Value	Unit	Source
gf	55.07	kJ/mol	Joback Method
hf	-348.03	kJ/mol	Joback Method
hfus	36.21	kJ/mol	Joback Method
hvap	86.60	kJ/mol	NIST Webbook
log10ws	-5.84		Crippen Method
logp	5.926		Crippen Method
mcvol	220.360	ml/mol	McGowan Method
pc	1480.43	kPa	Joback Method
rinpol	1662.00		NIST Webbook
rinpol	1674.00		NIST Webbook
rinpol	1662.00		NIST Webbook
rinpol	1668.00		NIST Webbook
rinpol	1659.80		NIST Webbook
rinpol	1659.80		NIST Webbook
rinpol	1666.00		NIST Webbook
rinpol	1668.00		NIST Webbook
ripol	1886.00		NIST Webbook
ripol	1889.00		NIST Webbook
ripol	1889.00		NIST Webbook
ripol	1873.00		NIST Webbook
ripol	1890.00		NIST Webbook
tb	557.15	K	Joback Method
tc	721.91	K	Joback Method
tf	277.46	K	Joback Method

vc	0.869	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	543.05	J/mol×K	557.15	Joback Method
cpg	577.26	J/mol×K	612.07	Joback Method
cpg	593.32	J/mol×K	639.53	Joback Method
cpg	608.71	J/mol×K	666.99	Joback Method
cpg	623.45	J/mol×K	694.45	Joback Method
cpg	637.57	J/mol×K	721.91	Joback Method
cpg	560.51	J/mol×K	584.61	Joback Method
dvisc	0.0018047	Pa×s	324.08	Joback Method
dvisc	0.0008975	Pa×s	370.69	Joback Method
dvisc	0.0005218	Pa×s	417.31	Joback Method
dvisc	0.0003383	Pa×s	463.92	Joback Method
dvisc	0.0002374	Pa×s	510.53	Joback Method
dvisc	0.0045884	Pa×s	277.46	Joback Method
dvisc	0.0001767	Pa×s	557.15	Joback Method
hvapt	68.70	kJ/mol	492.00	NIST Webbook
hvapt	80.20	kJ/mol	343.00	NIST Webbook
hvapt	78.00	kJ/mol	343.00	NIST Webbook
hvapt	74.40	kJ/mol	343.00	NIST Webbook
hvapt	72.90	kJ/mol	343.00	NIST Webbook
rhol	864.90	kg/m3	293.15	Density of Some 1-Chloroalkanes within the Temperature Range from (253.15 to 423.15) K
rhol	861.00	kg/m3	298.15	Density of Some 1-Chloroalkanes within the Temperature Range from (253.15 to 423.15) K
rhol	857.50	kg/m3	303.15	Density of Some 1-Chloroalkanes within the Temperature Range from (253.15 to 423.15) K

rhol	868.50	kg/m3	288.15	Density of Some 1-Chloroalkanes within the Temperature Range from (253.15 to 423.15) K
rhol	843.30	kg/m3	323.15	Density of Some 1-Chloroalkanes within the Temperature Range from (253.15 to 423.15) K
rhol	829.00	kg/m3	343.15	Density of Some 1-Chloroalkanes within the Temperature Range from (253.15 to 423.15) K
rhol	814.30	kg/m3	363.15	Density of Some 1-Chloroalkanes within the Temperature Range from (253.15 to 423.15) K
rhol	792.50	kg/m3	393.15	Density of Some 1-Chloroalkanes within the Temperature Range from (253.15 to 423.15) K
rhol	770.10	kg/m3	423.15	Density of Some 1-Chloroalkanes within the Temperature Range from (253.15 to 423.15) K

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	413.70	K	0.50	NIST Webbook

Correlations

Information	Value

Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.55734e+01
Coeff. B	-5.15727e+03
Coeff. C	-9.96100e+01
Temperature range (K), min.	437.00
Temperature range (K), max.	602.17

Sources

Density of Some 1-Chloroalkanes within the Temperature Range from (288.15 to 429.15) K:	https://www.doi.org/10.1021/je700325c
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=C2425549&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
hvapt:	Enthalpy of vaporization at a given temperature
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
rhol:	Liquid Density
rinpol:	Non-polar retention indices
ripol:	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