

Tetradecane, 1-fluoro-

Other names:	1-fluorotetradecane Tetradecyl fluoride
Inchi:	InChI=1S/C14H29F/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-15/h2-14H2,1H3
InchiKey:	YRDSYPITPPQNED-UHFFFAOYSA-N
Formula:	C14H29F
SMILES:	CCCCCCCCCCCCCF
Mol. weight [g/mol]:	216.38
CAS:	593-33-9

Physical Properties

Property code	Value	Unit	Source
chl	-9227.06 ± 0.54	kJ/mol	NIST Webbook
gf	-127.81	kJ/mol	Joback Method
hf	-533.00 ± 0.86	kJ/mol	NIST Webbook
hfl	-606.51 ± 0.54	kJ/mol	NIST Webbook
hfus	35.10	kJ/mol	Joback Method
hvap	73.50 ± 0.40	kJ/mol	NIST Webbook
hvap	73.50 ± 0.38	kJ/mol	NIST Webbook
log10ws	-5.54		Crippen Method
logp	5.657		Crippen Method
mcvol	209.890	ml/mol	McGowan Method
pc	1471.36	kPa	Joback Method
tb	518.99	K	Joback Method
tc	672.24	K	Joback Method
tf	248.13	K	Joback Method
vc	0.838	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	594.59	J/mol×K	646.70	Joback Method
cpg	513.98	J/mol×K	518.99	Joback Method
cpg	531.35	J/mol×K	544.53	Joback Method
cpg	548.08	J/mol×K	570.07	Joback Method

cpg	564.19	J/mol×K	595.61	Joback Method
cpg	579.68	J/mol×K	621.16	Joback Method
cpg	608.91	J/mol×K	672.24	Joback Method
hvapt	61.40	kJ/mol	496.50	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.31048e+01
Coeff. B	-3.98755e+03
Coeff. C	-8.88100e+01
Temperature range (K), min.	399.92
Temperature range (K), max.	600.47

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C593339&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
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

Legend

chl:	Standard liquid enthalpy of combustion
cpg:	Ideal gas heat capacity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase 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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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