1-Chlorotetracosane

Inchi: InChI=1S/C24H49Cl/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-
InchiKey: SUSHJBUUCQMSOK-UHFFFAOYSA-N
Formula: C24H49Cl
SMILES: CCCCCCCCCCCCCCCCCCCCCCCCCCCl
Mol. weight [g/mol]: 373.10
CAS: 6422-18-0

Physical Properties

Property code	Value	Unit	Source
af	1.0504		Cheméo Relay (1.0)
gf	139.27	kJ/mol	Joback Method
hf	-584.63	kJ/mol	Cheméo Relay (1.0)
hfus	62.11	kJ/mol	Joback Method
hvap	134.35	kJ/mol	Cheméo Relay (1.0)
ie	10.45	eV	Cheméo Relay (1.0)
log10ws	-9.76		Cheméo Relay (1.0)
logp	9.827		Crippen Method
mcvol	361.260	ml/mol	McGowan Method
pc	789.49	kPa	Joback Method
tb	612.02	K	Cheméo Relay (1.0)
tc	804.90	K	Cheméo Relay (1.0)
tf	328.01	K	Cheméo Relay (1.0)
vc	1.446	m3/kmol	Cheméo Relay (1.0)

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1227.95	J/mol×K	933.37	Joback Method
cpg	1245.22	J/mol×K	962.86	Joback Method
cpg	1149.60	J/mol×K	815.43	Joback Method
cpg	1170.67	J/mol×K	844.92	Joback Method
cpg	1190.72	J/mol×K	874.40	Joback Method
cpg	1209.80	J/mol×K	903.89	Joback Method
cpg	1127.47	J/mol×K	785.95	Joback Method

dvisc	0.0002920	Pa×s	522.09	Joback Method
dvisc	0.0006239	Pa×s	456.12	Joback Method
dvisc	0.0017237	Pa×s	390.16	Joback Method
dvisc	0.0001620	Pa×s	588.06	Joback Method
dvisc	0.0001012	Pa×s	654.02	Joback Method
dvisc	0.0000689	Pa×s	719.99	Joback Method
dvisc	0.0000501	Pa×s	785.95	Joback Method
hvapt	72.40	kJ/mol	658.50	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.30333e+01
Coeff. B	-5.08636e+03
Coeff. C	-1.32456e+02
Temperature range (K), min.	531.52
Temperature range (K), max.	791.15

Sources

Cheméo Relay (1.0, beta):

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C6422180&Units=SI

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

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

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

Cheméo Relay (1.0):

Legend

af: Acentric Factor

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
ie:	Ionization energy
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