2-chlorodecane

Inchi: InChI=1S/C10H21Cl/c1-3-4-5-6-7-8-9-10(2)11/h10H,3-9H2,1-2H3
InchiKey: OOZCPPCMBPSCDZ-UHFFFAOYSA-N
Formula: C10H21Cl
SMILES: CCCCCCCCC(C)Cl
Mol. weight [g/mol]: 176.73
CAS: 1002-56-8

Physical Properties

Property code	Value	Unit	Source
gf	18.95	kJ/mol	Joback Method
hf	-270.75	kJ/mol	Joback Method
hfus	22.33	kJ/mol	Joback Method
hvap	41.85	kJ/mol	Joback Method
log10ws	-4.27		Crippen Method
logp	4.364		Crippen Method
mcvol	164.000	ml/mol	McGowan Method
pc	2053.03	kPa	Joback Method
rinpol	1215.00		NIST Webbook
rinpol	1215.00		NIST Webbook
ripol	1376.00		NIST Webbook
ripol	1376.00		NIST Webbook
ripol	1374.00		NIST Webbook
tb	465.19	K	Joback Method
tc	637.49	K	Joback Method
tf	217.38	K	Joback Method
vc	0.638	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	348.66	J/mol×K	465.19	Joback Method
cpg	363.74	J/mol×K	493.91	Joback Method
cpg	378.21	J/mol×K	522.62	Joback Method
cpg	392.09	J/mol×K	551.34	Joback Method

cpg	405.38	J/mol×K	580.06	Joback Method
cpg	418.11	J/mol×K	608.77	Joback Method
cpg	430.30	J/mol×K	637.49	Joback Method
dvisc	0.0085349	Pa×s	217.38	Joback Method
dvisc	0.0029181	Pa×s	258.68	Joback Method
dvisc	0.0013408	Pa×s	299.98	Joback Method
dvisc	0.0007436	Pa×s	341.28	Joback Method
dvisc	0.0004684	Pa×s	382.59	Joback Method
dvisc	0.0003229	Pa×s	423.89	Joback Method
dvisc	0.0002377	Pa×s	465.19	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.45440e+01
Coeff. B	-4.19307e+03
Coeff. C	-7.70980e+01
Temperature range (K), min.	371.22
Temperature range (K), max.	531.26

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=C1002568&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

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