1,1-dichlorodecane

Inchi: InChI=1S/C10H20Cl2/c1-2-3-4-5-6-7-8-9-10(11)12/h10H,2-9H2,1H3
InchiKey: IXADHCVQNVXURI-UHFFFAOYSA-N
Formula: C10H20Cl2
SMILES: CCCCCCCCCC(Cl)Cl
Mol. weight [g/mol]: 211.17
CAS: 3162-62-7

Physical Properties

Property code	Value	Unit	Source
af	0.5489		Cheméo Relay (1.0)
gf	7.02	kJ/mol	Joback Method
hf	-292.84	kJ/mol	Cheméo Relay (1.0)
hfus	26.53	kJ/mol	Joback Method
hvap	65.44	kJ/mol	Cheméo Relay (1.0)
ie	10.30	eV	Cheméo Relay (1.0)
log10ws	-5.89		Cheméo Relay (1.0)
logp	4.931		Crippen Method
mcvol	176.240	ml/mol	McGowan Method
pc	1985.89	kPa	Joback Method
tb	510.50	K	Cheméo Relay (1.0)
tc	692.54	K	Cheméo Relay (1.0)
tf	249.55	K	Cheméo Relay (1.0)
vc	0.677	m3/kmol	Cheméo Relay (1.0)

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	380.49	J/mol×K	502.62	Joback Method
cpg	395.02	J/mol×K	532.28	Joback Method
cpg	408.92	J/mol×K	561.94	Joback Method
cpg	422.19	J/mol×K	591.60	Joback Method
cpg	434.87	J/mol×K	621.26	Joback Method
cpg	446.96	J/mol×K	650.92	Joback Method
cpg	458.49	J/mol×K	680.58	Joback Method

dvisc	0.0067379	Pa×s	247.30	Joback Method
dvisc	0.0025564	Pa×s	289.85	Joback Method
dvisc	0.0012431	Pa×s	332.41	Joback Method
dvisc	0.0007119	Pa×s	374.96	Joback Method
dvisc	0.0004568	Pa×s	417.51	Joback Method
dvisc	0.0003182	Pa×s	460.07	Joback Method
dvisc	0.0002356	Pa×s	502.62	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.47163e+01
Coeff. B	-4.55034e+03
Coeff. C	-8.57520e+01
Temperature range (K), min.	401.12
Temperature range (K), max.	569.58

Sources

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):

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=C3162627&Units=SI

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

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

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
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