

5-Chlorodecane

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

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	1200.00		NIST Webbook
ripol	1347.00		NIST Webbook
ripol	1344.00		NIST Webbook
ripol	1347.00		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/molxK	465.19	Joback Method
cpg	363.74	J/molxK	493.91	Joback Method
cpg	378.21	J/molxK	522.62	Joback Method
cpg	392.09	J/molxK	551.34	Joback Method
cpg	405.38	J/molxK	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	Paxs	217.38	Joback Method
dvisc	0.0029181	Paxs	258.68	Joback Method
dvisc	0.0013408	Paxs	299.98	Joback Method
dvisc	0.0007436	Paxs	341.28	Joback Method
dvisc	0.0004684	Paxs	382.59	Joback Method
dvisc	0.0003229	Paxs	423.89	Joback Method
dvisc	0.0002377	Paxs	465.19	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
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:	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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=R149349&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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

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