

Decane, 3-chloro-

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

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	232.70		NIST Webbook
rinpol	232.70		NIST Webbook
rinpol	1215.00		NIST Webbook
ripol	1376.00		NIST Webbook
ripol	1374.00		NIST Webbook
ripol	1376.00		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	$\ln(P_{vp}) = A + B/(T + C)$
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

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=C1002115&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/ci990307I
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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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