

Cycloundecane

Inchi: InChI=1S/C11H22/c1-2-4-6-8-10-11-9-7-5-3-1/h1-11H2
InchiKey: KYTNZWVKKKJXFS-UHFFFAOYSA-N
Formula: C11H22
SMILES: C1CCCCCCCCC1
Mol. weight [g/mol]: 154.29
CAS: 294-41-7

Physical Properties

Property code	Value	Unit	Source
chl	-7237.30 ± 1.10	kJ/mol	NIST Webbook
gf	13.40	kJ/mol	Joback Method
hf	-226.51	kJ/mol	Joback Method
hfus	4.51	kJ/mol	Joback Method
hvap	41.68	kJ/mol	Joback Method
log10ws	-4.32		Crippen Method
logp	4.291		Crippen Method
mcvol	154.990	ml/mol	McGowan Method
pc	2738.28	kPa	Joback Method
rinpol	1292.00		NIST Webbook
rinpol	1225.40		NIST Webbook
rinpol	1292.00		NIST Webbook
rinpol	1292.00		NIST Webbook
rinpol	1235.00		NIST Webbook
rinpol	1235.00		NIST Webbook
rinpol	1225.40		NIST Webbook
tb	453.00 ± 4.00	K	NIST Webbook
tc	732.47	K	Joback Method
tf	207.75	K	Joback Method
vc	0.545	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	349.42	J/mol×K	496.65	Joback Method

cpg	464.98	J/molxK	693.17	Joback Method
cpg	444.74	J/molxK	653.86	Joback Method
cpg	423.06	J/molxK	614.56	Joback Method
cpg	399.95	J/molxK	575.26	Joback Method
cpg	375.41	J/molxK	535.95	Joback Method
cpg	483.79	J/molxK	732.47	Joback Method
dvisc	0.0000884	Paxs	496.65	Joback Method
dvisc	0.0001614	Paxs	448.50	Joback Method
dvisc	0.0003406	Paxs	400.35	Joback Method
dvisc	0.0008817	Paxs	352.20	Joback Method
dvisc	0.0030844	Paxs	304.05	Joback Method
dvisc	0.0172849	Paxs	255.90	Joback Method
dvisc	0.2153400	Paxs	207.75	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.49166e+01
Coeff. B	-4.21936e+03
Coeff. C	-7.61400e+01
Temperature range (K), min.	364.56
Temperature range (K), max.	515.42

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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=C294417&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

Legend

chl:	Standard liquid enthalpy of combustion
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
rinpola:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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