

Cyclohexane, 1,1'-ethylidenebis-

Other names:	1,1-Dicyclohexylethane Ethane, 1,1-dicyclohexyl-
Inchi:	InChI=1S/C14H26/c1-12(13-8-4-2-5-9-13)14-10-6-3-7-11-14/h12-14H,2-11H2,1H3
InchiKey:	FUZBYNWONHYNOB-UHFFFAOYSA-N
Formula:	C14H26
SMILES:	CC(C1CCCCC1)C1CCCCC1
Mol. weight [g/mol]:	194.36
CAS:	2319-61-1

Physical Properties

Property code	Value	Unit	Source
chl	-8929.10	kJ/mol	NIST Webbook
chl	-8347.00	kJ/mol	NIST Webbook
gf	113.46	kJ/mol	Joback Method
hf	-228.93	kJ/mol	Joback Method
hfus	12.16	kJ/mol	Joback Method
hvap	47.23	kJ/mol	Joback Method
log10ws	-4.75		Crippen Method
logp	4.783		Crippen Method
mvol	186.400	ml/mol	McGowan Method
pc	2175.46	kPa	Joback Method
tb	530.00 ± 10.00	K	NIST Webbook
tb	530.00 ± 10.00	K	NIST Webbook
tb	544.32 ± 0.30	K	NIST Webbook
tb	544.32 ± 1.00	K	NIST Webbook
tc	787.02	K	Joback Method
tf	252.17 ± 0.70	K	NIST Webbook
tf	252.28 ± 0.20	K	NIST Webbook
tf	252.28 ± 0.30	K	NIST Webbook
vc	0.679	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
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cpg	629.40	J/mol×K	787.02	Joback Method
cpg	610.15	J/mol×K	748.92	Joback Method
cpg	589.42	J/mol×K	710.81	Joback Method
cpg	567.14	J/mol×K	672.70	Joback Method
cpg	543.26	J/mol×K	634.59	Joback Method
cpg	517.72	J/mol×K	596.49	Joback Method
cpg	490.46	J/mol×K	558.38	Joback Method
cpl	348.10	J/mol×K	313.00	NIST Webbook
dvisc	0.0002009	Paxs	558.38	Joback Method
dvisc	0.0002854	Paxs	506.53	Joback Method
dvisc	0.0004392	Paxs	454.69	Joback Method
dvisc	0.0007553	Paxs	402.84	Joback Method
dvisc	0.0015243	Paxs	350.99	Joback Method
dvisc	0.0039242	Paxs	299.15	Joback Method
dvisc	0.0150183	Paxs	247.30	Joback Method
hvapt	62.10	kJ/mol	386.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.38896e+01
Coeff. B	-4.18921e+03
Coeff. C	-9.24710e+01
Temperature range (K), min.	400.46
Temperature range (K), max.	580.83

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=C2319611&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/ci9903071
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

Legend

chl:	Standard liquid enthalpy of combustion
cpg:	Ideal gas heat capacity
cpl:	Liquid phase 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
hvapt:	Enthalpy of vaporization at a given temperature
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

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