Bicyclo[2.2.1]heptane, 2,2-dimethyl-3-methylene-, (1r)-

Other names: (+)-Camphene
(1R)-2,2-dimethyl-3-methylenebicyclo[2.2.1]heptane
Camphene, (1R,4S)-(+)-
d-Camphene

Inchi: InChI=1S/C10H16/c1-7-8-4-5-9(6-8)10(7,2)3/h8-9H,1,4-6H2,2-3H3/t8-,9?/m0/s1

InchiKey: CRPUJAZIXJMDBK-VEDVMXKPSA-N

Formula: C10H16

SMILES: C=C1[C@H]2CCC(C2)C1(C)C

Mol. weight [g/mol]: 136.24

CAS: 5794-03-6

Physical Properties

Property code	Value	Unit	Source
chl	-6148.40	kJ/mol	NIST Webbook
hf	-7.48	kJ/mol	Cheméo Relay (1.0)
hfus	9.44	kJ/mol	Joback Method
hvap	42.79	kJ/mol	Cheméo Relay (1.0)
ie	8.82	eV	Cheméo Relay (1.0)
logp	2.999		Crippen Method
mcvol	125.740	ml/mol	McGowan Method
rinpol	948.00		NIST Webbook
rinpol	954.00		NIST Webbook
rinpol	935.20		NIST Webbook
rinpol	954.00		NIST Webbook
rinpol	940.00		NIST Webbook
rinpol	935.20		NIST Webbook
ripol	1074.00		NIST Webbook
ripol	1074.00		NIST Webbook
tb	432.70	K	NIST Webbook
tf	329.98	K	Cheméo Relay (1.0)

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source

cpg	272.71	J/mol×K	440.68	Joback Method
cpg	291.03	J/mol×K	475.27	Joback Method
cpg	308.01	J/mol×K	509.86	Joback Method
cpg	323.77	J/mol×K	544.45	Joback Method
cpg	338.45	J/mol×K	579.04	Joback Method
cpg	352.17	J/mol×K	613.63	Joback Method
cpg	365.06	J/mol×K	648.22	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.37110e+01
Coeff. B	-3.37588e+03
Coeff. C	-6.14270e+01
Temperature range (K), min.	312.92
Temperature range (K), max.	463.34

Sources

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

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=C5794036&Units=SI

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

Legend

chl: Standard liquid enthalpy of combustion

cpg: Ideal gas heat capacity

hf: Enthalpy of formation at standard conditions

hfus:	Enthalpy of fusion at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
ie:	Ionization energy
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pvap:	Vapor pressure
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tf:	Normal melting (fusion) point