Camphor

Other names:	Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-
	Root bark oil
	Spirit of camphor
	1,7,7-Trimethylbicyclo[2.2.1]-2-heptanone
	1,7,7-Trimethylnorcamphor
	2-Bornanone
	2-Camphanone
	1,7,7-Trimethyl-bicyclo[2.2.1]heptan-2-one
	2-Camphonone
	Gum camphor
	Bornane, 2-oxo-
	Camphor, synthetic
	Huile de camphre
	2-Kamfanon
	Kampfer
	2-Keto-1,7,7-trimethylnorcamphane
	Matricaria camphor
	Norcamphor, 1,7,7-trimethyl-
	UN 2717
	Bicyclo[2.2.1]heptane-2-one, 1,7,7-trimethyl-
	Alphanon
	DL-Camphor
	Borneo camphor
	Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl-, (.+/-.)-
	(.+/-.)-Camphor
	bornan-2-one
	Camphor(DL)
Inchi:	InChI=1S/C10H16O/c1-9(2)7-4-5-10(9,3)8(11)6-7/h7H,4-6H2,1-3H3
InchiKey:	DSSYKIVIOFKYAU-UHFFFAOYSA-N
Formula:	C10H16O
SMILES:	CC12CCC(CC1=O)C2(C)C
Mol. weight [g/mol]:	152.23
CAS:	21368-68-3

Physical Properties

Property code	Value	Unit	Source

gf	1.44	kJ/mol	Joback Method
hf	-237.85	kJ/mol	Joback Method
hfus	3.81	kJ/mol	Joback Method
hvap	39.49	kJ/mol	Joback Method
log10ws	-2.35		Crippen Method
logp	2.402		Crippen Method
mcvol	131.610	ml/mol	McGowan Method
pc	3082.99	kPa	Joback Method
rinpol	1136.00		NIST Webbook
rinpol	1136.00		NIST Webbook
ripol	1518.00		NIST Webbook
ripol	1518.00		NIST Webbook
ss	291.76	J/mol×K	NIST Webbook
ss	290.15	J/mol×K	NIST Webbook
tb	477.20	K	NIST Webbook
tc	742.46	K	Joback Method
tf	445.60 ± 3.00	K	NIST Webbook
tf	451.30 ± 1.50	K	NIST Webbook
vc	0.503	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	324.29	J/mol×K	509.58	Joback Method
cpg	342.61	J/mol×K	548.39	Joback Method
cpg	359.48	J/mol×K	587.21	Joback Method
cpg	375.18	J/mol×K	626.02	Joback Method
cpg	389.96	J/mol×K	664.83	Joback Method
cpg	404.06	J/mol×K	703.65	Joback Method
cpg	417.76	J/mol×K	742.46	Joback Method
cps	238.70	J/mol×K	251.22	NIST Webbook
cps	251.20	J/mol×K	301.55	NIST Webbook

Sources

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

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C21368683&Units=SI

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

Legend

cpg:	Ideal gas heat capacity
cps:	Solid phase heat capacity
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
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
ss:	Solid phase molar entropy at standard conditions
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume