Ethenone, 2,2-diphenyl-

Other names: Ethenone,diphenyl-
Inchi: InChI=1S/C14H10O/c15-11-14(12-7-3-1-4-8-12)13-9-5-2-6-10-13/h1-10H
InchiKey: ZWJPCOALBPMBIC-UHFFFAOYSA-N
Formula: C14H10O
SMILES: O=C=C(c1ccccc1)c1ccccc1
Mol. weight [g/mol]: 194.23
CAS: 525-06-4

Physical Properties

Property code	Value	Unit	Source
gf	253.21	kJ/mol	Joback Method
hf	160.57	kJ/mol	Joback Method
hfus	26.32	kJ/mol	Joback Method
hvap	57.57	kJ/mol	Joback Method
ie	7.85	eV	NIST Webbook
ie	7.64 ± 0.02	eV	NIST Webbook
log10ws	-7.95		Crippen Method
logp	2.950		Crippen Method
mcvol	157.870	ml/mol	McGowan Method
pc	3611.55	kPa	Joback Method
tb	567.11	K	Joback Method
tc	811.37	K	Joback Method
tf	308.84	K	Joback Method
vc	0.602	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	350.27	J/mol×K	567.11	Joback Method
cpg	366.13	J/mol×K	607.82	Joback Method
cpg	380.63	J/mol×K	648.53	Joback Method
cpg	393.89	J/mol×K	689.24	Joback Method
cpg	406.00	J/mol×K	729.95	Joback Method
cpg	417.07	J/mol×K	770.66	Joback Method

cpg	427.21	J/mol×K	811.37	Joback Method

Sources

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=C525064&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

cpg:	Ideal gas 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
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume