(E)-1-Phenyl-1-butene

Other names:	(Z)-1-PHENYL-1-BUTENE
	1-phenyl-(E)-1-butene
	Benzene, 1-butenyl-, (E)-
	TRANS-1-PHENYL-1-BUTENE
Inchi:	InChI=1S/C10H12/c1-2-3-7-10-8-5-4-6-9-10/h3-9H,2H2,1H3/b7-3+
InchiKey:	MPMBRWOOISTHJV-XVNBXDOJSA-N
Formula:	C10H12
SMILES:	CCC=Cc1ccccc1
Mol. weight [g/mol]:	132.20
CAS:	1005-64-7

Physical Properties

Property code	Value	Unit	Source
gf	225.95	kJ/mol	Joback Method
hf	104.02	kJ/mol	Joback Method
hfus	15.90	kJ/mol	Joback Method
hvap	40.09	kJ/mol	Joback Method
ie	8.00	eV	NIST Webbook
ie	8.30	eV	NIST Webbook
log10ws	-3.13		Crippen Method
logp	3.110		Crippen Method
mcvol	123.700	ml/mol	McGowan Method
pc	3103.64	kPa	Joback Method
rinpol	1120.00		NIST Webbook
rinpol	1105.00		NIST Webbook
rinpol	1120.00		NIST Webbook
ripol	1479.00		NIST Webbook
ripol	1479.00		NIST Webbook
tb	470.25 ± 1.00	K	NIST Webbook
tb	471.85 ± 0.50	K	NIST Webbook
tb	473.15 ± 2.00	K	NIST Webbook
tb	471.90	K	NIST Webbook
tc	673.98	K	Joback Method
tf	230.05 ± 0.30	K	NIST Webbook
vc	0.468	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	240.15	J/mol×K	459.04	Joback Method
cpg	254.92	J/mol×K	494.86	Joback Method
cpg	268.75	J/mol×K	530.69	Joback Method
cpg	281.69	J/mol×K	566.51	Joback Method
cpg	293.79	J/mol×K	602.33	Joback Method
cpg	305.09	J/mol×K	638.16	Joback Method
cpg	315.65	J/mol×K	673.98	Joback Method
dvisc	0.0034135	Pa×s	223.80	Joback Method
dvisc	0.0014730	Pa×s	263.01	Joback Method
dvisc	0.0007906	Pa×s	302.21	Joback Method
dvisc	0.0004895	Pa×s	341.42	Joback Method
dvisc	0.0003345	Pa×s	380.63	Joback Method
dvisc	0.0002455	Pa×s	419.83	Joback Method
dvisc	0.0001899	Pa×s	459.04	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C1005647&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
KDB: https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=726
McGowan Method: http://link.springer.com/article/10.1007/BF02311772

Legend

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
ie: Ionization energy

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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume