Oxirane, (phenoxymethyl)-

Other names:	Propane, 1,2-epoxy-3-phenoxy- «gamma»-Phenoxypropylene oxide (Phenoxymethyl)oxirane Glycidol phenyl ether Glycidyl phenyl ether Phenol glycidyl ether Phenyl glycidyl ether Phenyl 2,3-epoxypropyl ether 1-Phenoxy-2,3-epoxypropane 1,2-Epoxy-3-phenoxypropane 2,3-Epoxypropyl phenyl ether 3-Phenoxy-1,2-epoxypropane 3-Phenoxy-1,2-propylene oxide 3-Phenyloxy-1,2-epoxypropane (.+/-.)-1,2-Epoxy-3-phenoxypropane Benzene, (2,3-epoxypropoxy)- Ether, phenylglycidyl Ether, 2,3-epoxypropyl phenyl Fenyl-glycidylether Phenoxypropene oxide Phenoxypropylene oxide Phenylglycydyl ether PGE Ageflex pge Phenol-glycidaether 3-Phenyloxy-1,2-epoxypropanel-, (.+/-.)- 2,3-Epoxy-1-phenoxypropane 2,3-Epoxypropoxybenzene Oxirane, 2-(phenoxymethyl)- NSC 53476 (.+/-.)-(Phenoxymethyl)oxirane 2-(Phenoxymethyl)oxirane
Inchi:	InChI=1S/C9H10O2/c1-2-4-8(5-3-1)10-6-9-7-11-9/h1-5,9H,6-7H2
InchiKey:	FQYUMYWMJTYZTK-UHFFFAOYSA-N
Formula:	C9H10O2
SMILES:	c1ccc(OCC2CO2)cc1
Mol. weight [g/mol]:	150.17
CAS:	122-60-1

Physical Properties

Property code	Value	Unit	Source
chl	-4801.21 ± 0.64	kJ/mol	NIST Webbook
chl	-4785.00 ± 2.00	kJ/mol	NIST Webbook
gf	6.94	kJ/mol	Joback Method
hf	-116.00 ± 2.00	kJ/mol	NIST Webbook
hf	-99.70 ± 1.10	kJ/mol	NIST Webbook
hf	-116.40 ± 2.10	kJ/mol	NIST Webbook
hfl	-169.53 ± 0.78	kJ/mol	NIST Webbook
hfl	-182.00 ± 2.00	kJ/mol	NIST Webbook
hfus	20.41	kJ/mol	Joback Method
hvap	65.60 ± 0.10	kJ/mol	NIST Webbook
hvap	69.80	kJ/mol	NIST Webbook
hvap	66.00	kJ/mol	NIST Webbook
hvap	69.85	kJ/mol	NIST Webbook
hvap	69.90 ± 0.70	kJ/mol	NIST Webbook
log10ws	-1.52		Crippen Method
logp	1.464		Crippen Method
mcvol	114.790	ml/mol	McGowan Method
pc	2950.00 ± 400.00	kPa	NIST Webbook
rhoc	324.38 ± 19.52	kg/m3	NIST Webbook
rinpol	1251.00		NIST Webbook
sl	274.90	J/mol×K	NIST Webbook
tb	518.20	K	NIST Webbook
tc	720.00 ± 8.00	K	NIST Webbook
tf	276.79	K	NIST Webbook
tt	280.00 ± 0.10	K	NIST Webbook
vc	0.427	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	252.57	J/mol×K	488.11	Joback Method
cpg	266.82	J/mol×K	525.08	Joback Method
cpg	280.13	J/mol×K	562.04	Joback Method
cpg	292.55	J/mol×K	599.01	Joback Method
cpg	304.12	J/mol×K	635.98	Joback Method
cpg	314.89	J/mol×K	672.94	Joback Method

cpg	324.91	J/mol×K	709.91	Joback Method
cpl	276.00	J/mol×K	298.15	NIST Webbook
cps	278.70	J/mol×K	298.00	NIST Webbook
dvisc	0.0004203	Pa×s	488.11	Joback Method
dvisc	0.0012877	Pa×s	318.31	Joback Method
dvisc	0.0009442	Pa×s	352.27	Joback Method
dvisc	0.0018913	Pa×s	284.35	Joback Method
dvisc	0.0005901	Pa×s	420.19	Joback Method
dvisc	0.0004918	Pa×s	454.15	Joback Method
dvisc	0.0007312	Pa×s	386.23	Joback Method
hfust	17.32	kJ/mol	279.80	NIST Webbook
hfust	17.32	kJ/mol	279.80	NIST Webbook
hvapt	60.30 ± 0.50	kJ/mol	466.00	NIST Webbook
hvapt	56.70 ± 0.40	kJ/mol	466.00	NIST Webbook
hvapt	53.10 ± 0.40	kJ/mol	466.00	NIST Webbook
hvapt	51.30 ± 0.50	kJ/mol	466.00	NIST Webbook
hvapt	49.40 ± 0.60	kJ/mol	466.00	NIST Webbook
hvapt	65.60 ± 0.10	kJ/mol	358.00	NIST Webbook
hvapt	65.61 ± 0.08	kJ/mol	343.00	NIST Webbook

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C122601&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

chl: Standard liquid enthalpy of combustion
cpg: Ideal gas heat capacity
cpl: Liquid phase heat capacity
cps: Solid phase heat capacity
dvisc: Dynamic viscosity
gf: Standard Gibbs free energy of formation
hf: Enthalpy of formation at standard conditions
hfl: Liquid phase enthalpy of formation at standard conditions

hfus:	Enthalpy of fusion at standard conditions
hfust:	Enthalpy of fusion at a given temperature
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
rhoc:	Critical density
rinpol:	Non-polar retention indices
sl:	Liquid phase molar entropy at standard conditions
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature
vc:	Critical Volume