

Benzene, (epoxyethyl)-, (R)-

Other names:	(R)-(Epoxyethyl)benzene R-Phenyloxirane (R)-Styrene oxide Oxirane, 2-phenyl-, (2R)-
Inchi:	InChI=1S/C8H8O/c1-2-4-7(5-3-1)8-6-9-8/h1-5,8H,6H2/t8-/m1/s1
InchiKey:	AWMVMTVKBNGEAK-MRVPVSSYSA-N
Formula:	C8H8O
SMILES:	c1ccc(C2CO2)cc1
Mol. weight [g/mol]:	120.15
CAS:	20780-53-4

Physical Properties

Property code	Value	Unit	Source
gf	103.52	kJ/mol	Joback Method
hf	-31.12	kJ/mol	Joback Method
hfus	16.63	kJ/mol	Joback Method
hvap	40.10	kJ/mol	Joback Method
log10ws	-1.71		Crippen Method
logp	1.758		Crippen Method
mcvol	94.830	ml/mol	McGowan Method
pc	4249.61	kPa	Joback Method
tb	442.81	K	Joback Method
tc	670.29	K	Joback Method
tf	250.85	K	Joback Method
vc	0.353	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	187.70	J/mol×K	442.81	Joback Method
cpg	201.41	J/mol×K	480.72	Joback Method
cpg	214.08	J/mol×K	518.64	Joback Method
cpg	225.78	J/mol×K	556.55	Joback Method
cpg	236.58	J/mol×K	594.46	Joback Method

cpg	246.54	J/mol×K	632.38	Joback Method
cpg	255.73	J/mol×K	670.29	Joback Method
dvisc	0.0018556	Pa×s	250.85	Joback Method
dvisc	0.0012889	Pa×s	282.84	Joback Method
dvisc	0.0009641	Pa×s	314.84	Joback Method
dvisc	0.0007608	Pa×s	346.83	Joback Method
dvisc	0.0006249	Pa×s	378.82	Joback Method
dvisc	0.0005293	Pa×s	410.82	Joback Method
dvisc	0.0004591	Pa×s	442.81	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	362.70	K	3.10	NIST Webbook

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C20780534&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
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
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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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