

Oxirane, (chloromethyl)-

Other names:	Propane, 1-chloro-2,3-epoxy- «alpha»-Epichlorohydrin «gamma»-Chloropropylene oxide (Chloromethyl)ethylene oxide (Chloromethyl)oxirane Chloropropylene oxide Epichlorohydrin Glycerol epichlorohydrin Glycidyl chloride SKEkhG 1-Chloro-2,3-Epoxypropane 1,2-Epoxy-3-chloropropane 2-(Chloromethyl)oxirane 2,3-Epoxypropyl chloride 3-Chloro-1,2-epoxypropane 3-Chloro-1,2-propylene oxide 3-Chloropropene-1,2-oxide 3-Chloropropylene oxide (DL)-«alpha»-Epichlorohydrin Epichlorohydrin Epichloorhydrine Epichlorhydrine Epichlorohydryna Epicloridrina Glycerol epichlorhydrin Oxirane, 2-(chloromethyl) 1-Chloor-2,3-epoxy-propaan 1-Chlor-2,3-epoxy-propan 1-Cloro-2,3-epossipropano Epichlorophydrin Rcra waste number U041 UN 2023 NSC 6747
Inchi:	InChI=1S/C3H5ClO/c4-1-3-2-5-3/h3H,1-2H2
InchiKey:	BRLQWZUYTZBJKN-UHFFFAOYSA-N
Formula:	C3H5ClO
SMILES:	C1CC1CO1
Mol. weight [g/mol]:	92.52
CAS:	13403-37-7

Physical Properties

Property code	Value	Unit	Source
gf	-62.92	kJ/mol	Joback Method
hf	-180.19	kJ/mol	Joback Method
hfus	13.84	kJ/mol	Joback Method
hvap	31.08	kJ/mol	Joback Method
log10ws	-0.33		Crippen Method
logp	0.624		Crippen Method
mcvol	60.380	ml/mol	McGowan Method
pc	4945.39	kPa	Joback Method
tb	389.70	K	NIST Webbook
tc	530.37	K	Joback Method
tf	198.00	K	Joback Method
vc	0.231	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	93.28	J/molxK	339.16	Joback Method
cpg	100.62	J/molxK	371.03	Joback Method
cpg	107.50	J/molxK	402.90	Joback Method
cpg	113.95	J/molxK	434.76	Joback Method
cpg	119.98	J/molxK	466.63	Joback Method
cpg	125.61	J/molxK	498.50	Joback Method
cpg	130.88	J/molxK	530.37	Joback Method
dvisc	0.0011282	Paxs	198.00	Joback Method
dvisc	0.0008743	Paxs	221.53	Joback Method
dvisc	0.0007115	Paxs	245.05	Joback Method
dvisc	0.0006004	Paxs	268.58	Joback Method
dvisc	0.0005206	Paxs	292.11	Joback Method
dvisc	0.0004612	Paxs	315.63	Joback Method
dvisc	0.0004154	Paxs	339.16	Joback Method

Sources

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=C13403377&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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

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