

# Oxirane, (chloromethyl)-

<b>Other names:</b>	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-epossiopropano Epichlorophydrin Rcra waste number U041 UN 2023 NSC 6747
<b>Inchi:</b>	InChI=1S/C3H5ClO/c4-1-3-2-5-3/h3H,1-2H2
<b>InchiKey:</b>	BRLQWZUYTZBJKN-UHFFFAOYSA-N
<b>Formula:</b>	C3H5ClO
<b>SMILES:</b>	C1CC1CO1
<b>Mol. weight [g/mol]:</b>	92.52
<b>CAS:</b>	106-89-8

# Physical Properties

Property code	Value	Unit	Source
chl	-1761.64 ± 0.77	kJ/mol	NIST Webbook
chl	-1235.80 ± 0.85	kJ/mol	NIST Webbook
chl	-1770.00 ± 0.40	kJ/mol	NIST Webbook
gf	-62.92	kJ/mol	Joback Method
hf	-108.00 ± 4.20	kJ/mol	NIST Webbook
hfl	-149.00 ± 0.40	kJ/mol	NIST Webbook
hfus	13.84	kJ/mol	Joback Method
hvap	31.08	kJ/mol	Joback Method
ie	10.66	eV	NIST Webbook
ie	10.60	eV	NIST Webbook
ie	10.64	eV	NIST Webbook
ie	10.64	eV	NIST Webbook
log10ws	-0.33		Crippen Method
logp	0.624		Crippen Method
mcvol	60.380	ml/mol	McGowan Method
pc	4945.39	kPa	Joback Method
rinpol	700.00		NIST Webbook
rinpol	708.00		NIST Webbook
rinpol	730.00		NIST Webbook
rinpol	708.00		NIST Webbook
rinpol	695.00		NIST Webbook
rinpol	720.00		NIST Webbook
rinpol	700.00		NIST Webbook
rinpol	730.00		NIST Webbook
rinpol	720.00		NIST Webbook
rinpol	695.00		NIST Webbook
ripol	1205.00		NIST Webbook
ripol	1169.00		NIST Webbook
ripol	1169.00		NIST Webbook
tb	389.20	K	NIST Webbook
tb	390.00 ± 2.00	K	NIST Webbook
tb	388.35	K	NIST Webbook
tb	389.60 ± 0.70	K	NIST Webbook
tc	530.37	K	Joback Method
tf	215.05	K	NIST Webbook
vc	0.231	m <sup>3</sup> /kmol	Joback Method

# Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	125.61	J/molxK	498.50	Joback Method
cpg	119.98	J/molxK	466.63	Joback Method
cpg	113.95	J/molxK	434.76	Joback Method
cpg	107.50	J/molxK	402.90	Joback Method
cpg	100.62	J/molxK	371.03	Joback Method
cpg	93.28	J/molxK	339.16	Joback Method
cpg	130.88	J/molxK	530.37	Joback Method
dvisc	0.0011282	Paxs	198.00	Joback Method
dvisc	0.0004154	Paxs	339.16	Joback Method
dvisc	0.0004612	Paxs	315.63	Joback Method
dvisc	0.0005206	Paxs	292.11	Joback Method
dvisc	0.0006004	Paxs	268.58	Joback Method
dvisc	0.0007115	Paxs	245.05	Joback Method
dvisc	0.0008743	Paxs	221.53	Joback Method
hvapt	41.00 ± 4.20	kJ/mol	293.00	NIST Webbook
hvapt	42.90	kJ/mol	323.50	NIST Webbook

## Sources

<b>McGowan Method:</b>	<a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>
<b>NIST Webbook:</b>	<a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C106898&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C106898&amp;Units=SI</a>
<b>Crippen Method:</b>	<a href="http://pubs.acs.org/doi/abs/10.1021/ci9903071">http://pubs.acs.org/doi/abs/10.1021/ci9903071</a>
<b>Crippen Method:</b>	<a href="https://www.chemeo.com/doc/models/crippen_log10ws">https://www.chemeo.com/doc/models/crippen_log10ws</a>
<b>Joback Method:</b>	<a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>

## Legend

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

<b>hfus:</b>	Enthalpy of fusion at standard conditions
<b>hvap:</b>	Enthalpy of vaporization at standard conditions
<b>hvapt:</b>	Enthalpy of vaporization at a given temperature
<b>ie:</b>	Ionization energy
<b>log10ws:</b>	Log10 of Water solubility in mol/l
<b>logp:</b>	Octanol/Water partition coefficient
<b>mcvol:</b>	McGowan's characteristic volume
<b>pc:</b>	Critical Pressure
<b>rinpola:</b>	Non-polar retention indices
<b>ripola:</b>	Polar retention indices
<b>tb:</b>	Normal Boiling Point Temperature
<b>tc:</b>	Critical Temperature
<b>tf:</b>	Normal melting (fusion) point
<b>vc:</b>	Critical Volume

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