Butanoic acid, 4-(2,4-dichlorophenoxy)-

Other names:	(2,4-Dichlorophenoxy)butyric acid
	2,4-D butyric acid
	2,4-DB
	2,4-DM
	4-(2,4-DB)
	4-(2,4-Dichlorophenoxy)butanoic acid
	4-(2,4-Dichlorophenoxy)butyric acid
	Buratal
	Butirex
	Butormone
	Butoxon
	Butoxone
	Butoxone ester
	Butyrac
	Butyrac 118
	Butyrac 200
	Butyrac ester
	Butyric acid, 4-(2,4-dichlorophenoxy)-
	Campbell's db straight
	Kyselina 4-(2,4-dichlorfenoxy)maselna
	Legumex
	Legumex D
	NSC 70337
	Sys 67 Buratal
	Venceweed
	«gamma»-(2,4-Dichlorophenoxy)butyric acid
Inchi:	InChI=1S/C10H10Cl2O3/c11-7-3-4-9(8(12)6-7)15-5-1-2-10(13)14/h3-4,6H,1-2,5H2,(H,13
InchiKey:	YIVXMZJTEQBPQO-UHFFFAOYSA-N
Formula:	C10H10Cl2O3
SMILES:	O=C(O)CCCOc1ccc(Cl)cc1Cl
Mol. weight [g/mol]:	249.09
CAS:	94-82-6

Physical Properties

Property code	Value	Unit	Source
gf	-268.13	kJ/mol	Joback Method

hf	-464.65	kJ/mol	Joback Method
hfus	30.19	kJ/mol	Joback Method
hsub	124.00 ± 6.00	kJ/mol	NIST Webbook
hsub	149.00 ± 2.00	kJ/mol	NIST Webbook
hvap	76.06	kJ/mol	Joback Method
log10ws	-3.67		Aqueous Solubility Prediction Method
logp	3.237		Crippen Method
mcvol	165.790	ml/mol	McGowan Method
pc	3042.32	kPa	Joback Method
rinpol	1869.00		NIST Webbook
rinpol	1869.00		NIST Webbook
tb	708.17	K	Joback Method
tc	915.69	K	Joback Method
tf	391.49 ± 0.20	K	NIST Webbook
tf	390.90 ± 0.20	K	NIST Webbook
vc	0.628	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	433.93	J/mol×K	881.10	Joback Method
cpg	419.62	J/mol×K	811.93	Joback Method
cpg	411.60	J/mol×K	777.34	Joback Method
cpg	402.98	J/mol×K	742.76	Joback Method
cpg	393.76	J/mol×K	708.17	Joback Method
cpg	427.06	J/mol×K	846.51	Joback Method
cpg	440.24	J/mol×K	915.69	Joback Method
dvisc	0.0009269	Pa×s	446.74	Joback Method
dvisc	0.0000468	Pa×s	708.17	Joback Method
dvisc	0.0000654	Pa×s	664.60	Joback Method
dvisc	0.0000958	Pa×s	621.03	Joback Method
dvisc	0.0001485	Pa×s	577.45	Joback Method
dvisc	0.0002475	Pa×s	533.88	Joback Method
dvisc	0.0004517	Pa×s	490.31	Joback Method
hfust	35.00	kJ/mol	395.50	NIST Webbook
hfust	38.42	kJ/mol	391.40	NIST Webbook
hsubt	146.00 ± 1.00	kJ/mol	373.50	NIST Webbook

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C94826&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
Aqueous Solubility Prediction Method:	http://onschallenge.wikispaces.com/file/view/AqueousDataset002.xlsx/351826032/AqueousDa
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
hfust:	Enthalpy of fusion at a given temperature
hsub:	Enthalpy of sublimation at standard conditions
hsubt:	Enthalpy of sublimation at a given temperature
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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume