1,3-Butylene glycol dimethacrylate

Other names:	1,3-Butanediol, bis(2-methylpropenoate)
	1,3-butanediol dimethacrylate
	1,3-butanediyl dimethacrylate
	1-methyltrimethylene dimethacrylate
	2-Propenoic acid, 2-methyl-, 1-methyl-1,3-propanediyl ester
	2-methyl-2-propenoic acid 1-methyl-1,3-propanediyl ester
	butane-1,3-diyl bis(2-methylacrylate)
Inchi:	InChI=1S/C12H18O4/c1-8(2)11(13)15-7-6-10(5)16-12(14)9(3)4/h10H,1,3,6-7H2,2,4-5H3
InchiKey:	VDYWHVQKENANGY-UHFFFAOYSA-N
Formula:	C12H18O4
SMILES:	C=C(C)C(=O)OCCC(C)OC(=O)C(=C)C
Mol. weight [g/mol]:	226.27
CAS:	1189-08-8

Physical Properties

Property code	Value	Unit	Source
gf	-261.54	kJ/mol	Joback Method
hf	-554.61	kJ/mol	Joback Method
hfus	23.71	kJ/mol	Joback Method
hvap	59.05	kJ/mol	Joback Method
log10ws	-2.39		Crippen Method
logp	2.004		Crippen Method
mcvol	186.220	ml/mol	McGowan Method
pc	2111.94	kPa	Joback Method
tb	619.22	K	Joback Method
tc	810.79	K	Joback Method
tf	322.88	K	Joback Method
vc	0.714	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	472.43	J/mol×K	619.22	Joback Method
cpg	486.48	J/mol×K	651.15	Joback Method

cpg	499.84	J/mol×K	683.08	Joback Method
cpg	512.51	J/mol×K	715.01	Joback Method
cpg	524.50	J/mol×K	746.93	Joback Method
cpg	535.82	J/mol×K	778.86	Joback Method
cpg	546.47	J/mol×K	810.79	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1189088&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Phase behaviour for the (carbon dioxide + 1,3-butanediol diacrylate) and (carbon dioxide + 1,3-butanediol dimethacrylate) systems at elevated pressures and temperatures:	https://www.doi.org/10.1016/j.jct.2013.11.030
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
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