1-Carboxycyclopropane-2-acetic acid (Z), dimethyl ester

Other names: Methyl 2-(2-methoxy-2-oxoethyl)cyclopropanecarboxylate, (Z)-
2-Methoxycarbonylmethyl-cyclopropanecarboxylic acid methyl ester, Z
Inchi: InChI=1S/C8H12O4/c1-11-7(9)4-5-3-6(5)8(10)12-2/h5-6H,3-4H2,1-2H3/t5-,6-/m1/s1
InchiKey: UXTUIDNFTDLRIX-PHDIDXHHSA-N
Formula: C8H12O4
SMILES: COC(=O)CC1CC1C(=O)OC
Mol. weight [g/mol]: 172.18
CAS: 77462-53-4

Physical Properties

Property code	Value	Unit	Source
gf	-398.32	kJ/mol	Joback Method
hf	-645.59	kJ/mol	Joback Method
hfus	21.26	kJ/mol	Joback Method
hvap	51.32	kJ/mol	Joback Method
log10ws	-0.31		Crippen Method
logp	0.359		Crippen Method
mcvol	127.600	ml/mol	McGowan Method
pc	3096.73	kPa	Joback Method
rinpol	1175.00		NIST Webbook
rinpol	1175.00		NIST Webbook
tb	537.09	K	Joback Method
tc	733.84	K	Joback Method
tf	337.94	K	Joback Method
vc	0.487	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	308.99	J/mol×K	537.09	Joback Method
cpg	321.47	J/mol×K	569.88	Joback Method
cpg	333.36	J/mol×K	602.67	Joback Method
cpg	344.67	J/mol×K	635.46	Joback Method
cpg	355.42	J/mol×K	668.25	Joback Method

cpg	365.61	J/mol×K	701.05	Joback Method
cpg	375.24	J/mol×K	733.84	Joback Method
dvisc	0.0016772	Pa×s	337.94	Joback Method
dvisc	0.0012748	Pa×s	371.13	Joback Method
dvisc	0.0010135	Pa×s	404.32	Joback Method
dvisc	0.0008344	Pa×s	437.51	Joback Method
dvisc	0.0007060	Pa×s	470.71	Joback Method
dvisc	0.0006106	Pa×s	503.90	Joback Method
dvisc	0.0005377	Pa×s	537.09	Joback Method

Sources

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
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C77462534&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
rinpol: Non-polar retention indices
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume