Benzene, (2,2-dimethoxyethyl)-

Other names:	Acetaldehyde, phenyl-, dimethyl acetal
	«alpha»-Tolylaldehyde dimethyl acetal
	Hyscylene P
	Phenacetaldehyde dimethyl acetal
	Phenylacetaldehyde dimethyl acetal
	Phenylacetic aldehyde dimethyl acetal
	Ethane, 1,1-dimethoxy-2-phenyl-
	Viridine
	(2,2-Dimethoxyethyl)benzene
	1,1-Dimethoxy-2-phenylethane
	2,2-Dimethoxy-1-phenylethane
	2-Phenylacetaldehyde dimethyl acetal
	NSC 5174
	Viridine [benzene (2,2-di-methoxy ethyl)]
Inchi:	InChI=1S/C10H14O2/c1-11-10(12-2)8-9-6-4-3-5-7-9/h3-7,10H,8H2,1-2H3
InchiKey:	WNJSKZBEWNVKGU-UHFFFAOYSA-N
Formula:	C10H14O2
SMILES:	COC(Cc1ccccc1)OC
Mol. weight [g/mol]:	166.22
CAS:	101-48-4

Physical Properties

Property code	Value	Unit	Source
gf	-66.71	kJ/mol	Joback Method
hf	-282.92	kJ/mol	Joback Method
hfus	14.55	kJ/mol	Joback Method
hvap	44.56	kJ/mol	Joback Method
log10ws	-1.89		Crippen Method
logp	1.848		Crippen Method
mcvol	139.740	ml/mol	McGowan Method
pc	2850.52	kPa	Joback Method
ripol	2244.10		NIST Webbook
ripol	2249.20		NIST Webbook
ripol	2244.10		NIST Webbook
tb	499.28	K	Joback Method
tc	705.36	K	Joback Method
tf	258.34	K	Joback Method

vc	0.517	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	305.86	J/mol×K	499.28	Joback Method
cpg	320.62	J/mol×K	533.63	Joback Method
cpg	334.67	J/mol×K	567.97	Joback Method
cpg	348.03	J/mol×K	602.32	Joback Method
cpg	360.71	J/mol×K	636.66	Joback Method
cpg	372.70	J/mol×K	671.01	Joback Method
cpg	384.02	J/mol×K	705.36	Joback Method
dvisc	0.0029052	Pa×s	258.34	Joback Method
dvisc	0.0012843	Pa×s	298.50	Joback Method
dvisc	0.0006891	Pa×s	338.65	Joback Method
dvisc	0.0004219	Pa×s	378.81	Joback Method
dvisc	0.0002837	Pa×s	418.97	Joback Method
dvisc	0.0002046	Pa×s	459.12	Joback Method
dvisc	0.0001554	Pa×s	499.28	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	493.20	K	101.00	NIST Webbook

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C101484&Units=SI

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

Joback Method: https://en.wikipedia.org/wiki/Joback_method

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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume