1,3-Dioxolane, 4-methyl-2-phenyl-

Other names:	Benzaldehyde propylene glycol acetal
	4-methyl-2-phenyl-1,3-dioxolane
	PG acetal of benzaldehyde
Inchi:	InChI=1S/C10H12O2/c1-8-7-11-10(12-8)9-5-3-2-4-6-9/h2-6,8,10H,7H2,1H3
InchiKey:	CDIKGISJRLTLRA-UHFFFAOYSA-N
Formula:	C10H12O2
SMILES:	CC1COC(c2ccccc2)O1
Mol. weight [g/mol]:	164.20
CAS:	2568-25-4

Physical Properties

Property code	Value	Unit	Source
gf	2.33	kJ/mol	Joback Method
hf	-237.06	kJ/mol	Joback Method
hfus	26.66	kJ/mol	Joback Method
hvap	49.10	kJ/mol	Joback Method
log10ws	-2.25		Crippen Method
logp	2.120		Crippen Method
mcvol	128.880	ml/mol	McGowan Method
pc	3388.08	kPa	Joback Method
rinpol	1272.40		NIST Webbook
ripol	1840.00		NIST Webbook
ripol	1840.00		NIST Webbook
tb	519.39	K	Joback Method
tc	755.09	K	Joback Method
tf	288.68	K	Joback Method
vc	0.469	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	303.09	J/mol×K	519.39	Joback Method
cpg	378.75	J/mol×K	715.81	Joback Method
cpg	365.79	J/mol×K	676.52	Joback Method

cpg	351.79	J/mol×K	637.24	Joback Method
cpg	336.71	J/mol×K	597.96	Joback Method
cpg	320.49	J/mol×K	558.67	Joback Method
cpg	390.71	J/mol×K	755.09	Joback Method
dvisc	0.0003635	Pa×s	519.39	Joback Method
dvisc	0.0004511	Pa×s	480.94	Joback Method
dvisc	0.0005811	Pa×s	442.49	Joback Method
dvisc	0.0007857	Pa×s	404.04	Joback Method
dvisc	0.0011320	Pa×s	365.58	Joback Method
dvisc	0.0017769	Pa×s	327.13	Joback Method
dvisc	0.0031452	Pa×s	288.68	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C2568254&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
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
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
ripol: Polar retention indices
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume