4-phenyl-2-buten-1-al

Inchi: InChI=1S/C10H10O/c11-9-5-4-8-10-6-2-1-3-7-10/h1-7,9H,8H2/b5-4+
InchiKey: WLNLUFZWBZXINT-SNAWJCMRSA-N
Formula: C10H10O
SMILES: O=CC=CCc1ccccc1
Mol. weight [g/mol]: 146.19

Physical Properties

Property code	Value	Unit	Source
gf	126.43	kJ/mol	Joback Method
hf	18.44	kJ/mol	Joback Method
hfus	18.19	kJ/mol	Joback Method
hvap	46.81	kJ/mol	Joback Method
log10ws	-2.25		Crippen Method
logp	1.984		Crippen Method
mcvol	125.270	ml/mol	McGowan Method
pc	3376.28	kPa	Joback Method
ripol	1930.00		NIST Webbook
tb	507.70	K	Joback Method
tc	727.30	K	Joback Method
tf	265.80	K	Joback Method
vc	0.484	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	259.95	J/mol×K	507.70	Joback Method
cpg	316.76	J/mol×K	690.70	Joback Method
cpg	307.00	J/mol×K	654.10	Joback Method
cpg	296.48	J/mol×K	617.50	Joback Method
cpg	285.17	J/mol×K	580.90	Joback Method
cpg	273.01	J/mol×K	544.30	Joback Method
cpg	325.84	J/mol×K	727.30	Joback Method
dvisc	0.0002372	Pa×s	507.70	Joback Method
dvisc	0.0003037	Pa×s	467.38	Joback Method

dvisc	0.0004074	Pa×s	427.07	Joback Method
dvisc	0.0005810	Pa×s	386.75	Joback Method
dvisc	0.0009000	Pa×s	346.43	Joback Method
dvisc	0.0015645	Pa×s	306.12	Joback Method
dvisc	0.0032161	Pa×s	265.80	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=R308122&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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume