2-Propenoic acid, 3-phenyl-, phenylmethyl ester, (E)-

Other names: (E)-Benzyl cinnamate
Benzyl trans-cinnamate
Inchi: InChI=1S/C16H14O2/c17-16(12-11-14-7-3-1-4-8-14)18-13-15-9-5-2-6-10-15/h1-12H,13H
InchiKey: NGHOLYJTSCBCGC-VAWYXSNFSA-N
Formula: C16H14O2
SMILES: O=C(C=Cc1ccccc1)OCc1ccccc1
Mol. weight [g/mol]: 238.28
CAS: 78277-23-3

Physical Properties

Property code	Value	Unit	Source
gf	154.96	kJ/mol	Joback Method
hf	-28.09	kJ/mol	Joback Method
hfus	28.27	kJ/mol	Joback Method
hvap	64.88	kJ/mol	Joback Method
log10ws	-4.10		Crippen Method
logp	3.443		Crippen Method
mcvol	191.920	ml/mol	McGowan Method
pc	2515.07	kPa	Joback Method
rinpol	2102.30		NIST Webbook
rinpol	2102.30		NIST Webbook
tb	699.29	K	Joback Method
tc	941.67	K	Joback Method
tf	390.00	K	Joback Method
vc	0.720	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	495.69	J/mol×K	699.29	Joback Method
cpg	511.23	J/mol×K	739.69	Joback Method
cpg	525.51	J/mol×K	780.08	Joback Method
cpg	538.61	J/mol×K	820.48	Joback Method
cpg	550.60	J/mol×K	860.88	Joback Method

cpg	561.58	J/mol×K	901.28	Joback Method
cpg	571.63	J/mol×K	941.67	Joback Method
dvisc	0.0013204	Pa×s	390.00	Joback Method
dvisc	0.0006777	Pa×s	441.55	Joback Method
dvisc	0.0003999	Pa×s	493.10	Joback Method
dvisc	0.0002607	Pa×s	544.64	Joback Method
dvisc	0.0001830	Pa×s	596.19	Joback Method
dvisc	0.0001359	Pa×s	647.74	Joback Method
dvisc	0.0001055	Pa×s	699.29	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C78277233&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
rinpol: Non-polar retention indices
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume