trans-2-Phenyl-1-cyclohexanol

Other names: Cyclohexanol, 2-phenyl-, trans-
(E)-2-Phenylcyclohexanol
trans-2-phenylcyclohexanol
Inchi: InChI=1S/C12H16O/c13-12-9-5-4-8-11(12)10-6-2-1-3-7-10/h1-3,6-7,11-13H,4-5,8-9H2/t1
InchiKey: AAIBYZBZXNWTPP-NEPJUHHUSA-N
Formula: C12H16O
SMILES: OC1CCCCC1c1ccccc1
Mol. weight [g/mol]: 176.25
CAS: 2362-61-0

Physical Properties

Property code	Value	Unit	Source
gf	42.49	kJ/mol	Joback Method
hf	-172.73	kJ/mol	Joback Method
hfus	17.87	kJ/mol	Joback Method
hvap	61.38	kJ/mol	Joback Method
log10ws	-3.18		Crippen Method
logp	2.705		Crippen Method
mcvol	151.190	ml/mol	McGowan Method
pc	3173.97	kPa	Joback Method
tb	607.70	K	Joback Method
tc	828.54	K	Joback Method
tf	315.38	K	Joback Method
vc	0.550	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	398.39	J/mol×K	607.70	Joback Method
cpg	415.76	J/mol×K	644.51	Joback Method
cpg	431.98	J/mol×K	681.31	Joback Method
cpg	447.07	J/mol×K	718.12	Joback Method
cpg	461.09	J/mol×K	754.93	Joback Method
cpg	474.08	J/mol×K	791.73	Joback Method

cpg	486.08	J/mol×K	828.54	Joback Method
dvisc	0.0096489	Pa×s	315.38	Joback Method
dvisc	0.0026230	Pa×s	364.10	Joback Method
dvisc	0.0009697	Pa×s	412.82	Joback Method
dvisc	0.0004423	Pa×s	461.54	Joback Method
dvisc	0.0002344	Pa×s	510.26	Joback Method
dvisc	0.0001387	Pa×s	558.98	Joback Method
dvisc	0.0000893	Pa×s	607.70	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	426.70	K	2.10	NIST Webbook

Sources

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
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C2362610&Units=SI

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
tb: Normal Boiling Point Temperature

tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume