Dicumyl peroxide

Other names:

Bis(«alpha»,«alpha»-dimethylbenzyl) peroxide
Peroxide, bis(1-methyl-1-phenylethyl)
«alpha»-Cumyl peroxide
«alpha»,«alpha»'-Dicumyl peroxide
Active dicumyl peroxide
Bis(2-phenyl-2-propyl) peroxide
Cumene peroxide
Cumyl peroxide
Di-«alpha»-cumyl peroxide
Di-Cup
Di-Cup 40C
Dicumene hydroperoxide
Dicumenyl peroxide
Diisopropylbenzene peroxide
DiCup 40KE
Isopropylbenzene peroxide
Luperco 500-40C
Luperco 500-40KE
Luperox 500
Luperox 500R
Luperox 500T
Percumyl D
Percumyl D 40
Perkadox B
Perkadox BC
Perkadox SB
Peroxide, bis(«alpha»,«alpha»-dimethylbenzyl)
Bis(1-methyl-1-phenylethyl) peroxide
Di-cupr
Luperco
Luperox
Varox dcp-R
Varox dcp-T
Peroximon DC-40
Di-cup 40haf
Di-Cup T
Kayacumyl D
NSC 56772
Perkadox BC 40
Perkadox BC 9

	Perkadox BC 95
Inchi:	InChI=1S/C18H22O2/c1-17(2,15-11-7-5-8-12-15)19-20-18(3,4)16-13-9-6-10-14-16/h5-14
InchiKey:	XMNIXWIUMCBBBL-UHFFFAOYSA-N
Formula:	C18H22O2
SMILES:	CC(C)(OOC(C)(C)c1ccccc1)c1ccccc1
Mol. weight [g/mol]:	270.37
CAS:	80-43-3

Physical Properties

Property code	Value	Unit	Source
gf	121.18	kJ/mol	Joback Method
hf	-223.73	kJ/mol	Joback Method
hfus	18.01	kJ/mol	Joback Method
hvap	62.44	kJ/mol	Joback Method
log10ws	-5.07		Crippen Method
logp	4.805		Crippen Method
mcvol	228.700	ml/mol	McGowan Method
pc	1923.67	kPa	Joback Method
tb	702.98	K	Joback Method
tc	943.96	K	Joback Method
tf	394.76	K	Joback Method
vc	0.842	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	639.73	J/mol×K	702.98	Joback Method
cpg	659.23	J/mol×K	743.14	Joback Method
cpg	677.14	J/mol×K	783.31	Joback Method
cpg	693.55	J/mol×K	823.47	Joback Method
cpg	708.59	J/mol×K	863.63	Joback Method
cpg	722.36	J/mol×K	903.80	Joback Method
cpg	734.97	J/mol×K	943.96	Joback Method
dvisc	0.0011758	Pa×s	394.76	Joback Method
dvisc	0.0005199	Pa×s	446.13	Joback Method
dvisc	0.0002721	Pa×s	497.50	Joback Method
dvisc	0.0001608	Pa×s	548.87	Joback Method

dvisc	0.0001039	Pa×s	600.24	Joback Method
dvisc	0.0000720	Pa×s	651.61	Joback Method
dvisc	0.0000526	Pa×s	702.98	Joback Method
hfust	28.14	kJ/mol	312.40	NIST Webbook

Sources

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=C80433&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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
hfust:	Enthalpy of fusion at a given temperature
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
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume