Dicyclohexyl phthalate

Other names:	1,2-Benzenedicarboxylic acid, dicyclohexyl ester
	Phthalic acid, dicyclohexyl ester
	Ergoplast FDC
	HF 191
	KP 201
	Unimoll 66
	Ergoplast.fdc
	Howflex CP
	DCHP
	Dicyclohexyl benzene-1,2-dicarboxylate
	Morflex 150
	Unimoll 66 M
	Uniplex 250
	1,2-Benzenedicarboxylic acid, 1,2-dicyclohexyl ester
	NSC 6101
Inchi:	InChI=1S/C20H26O4/c21-19(23-15-9-3-1-4-10-15)17-13-7-8-14-18(17)20(22)24-16-11-5
InchiKey:	VOWAEIGWURALJQ-UHFFFAOYSA-N
Formula:	C20H26O4
SMILES:	O=C(OC1CCCCC1)c1ccccc1C(=O)OC1CCCCC1
Mol. weight [g/mol]:	330.42
CAS:	84-61-7

Physical Properties

Property code	Value	Unit	Source
chs	-10655.00 ± 11.00	kJ/mol	NIST Webbook
gf	-198.64	kJ/mol	Joback Method
hf	-612.03	kJ/mol	Joback Method
hfs	-931.00 ± 11.00	kJ/mol	NIST Webbook
hfus	30.45	kJ/mol	Joback Method
hvap	82.22	kJ/mol	Joback Method
log10ws	-6.16		Crippen Method
logp	4.666		Crippen Method
mcvol	262.060	ml/mol	McGowan Method
pc	1857.91	kPa	Joback Method
rinpol	2475.00		NIST Webbook
rinpol	2461.00		NIST Webbook
rinpol	2453.00		NIST Webbook

rinpol	2472.00		NIST Webbook
rinpol	2461.00		NIST Webbook
rinpol	2472.00		NIST Webbook
rinpol	2523.00		NIST Webbook
rinpol	2524.00		NIST Webbook
rinpol	2524.00		NIST Webbook
rinpol	2526.00		NIST Webbook
rinpol	2526.00		NIST Webbook
rinpol	2527.00		NIST Webbook
rinpol	2533.00		NIST Webbook
tb	880.34	K	Joback Method
tc	1126.04	K	Joback Method
tf	513.18	K	Joback Method
vc	0.962	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	867.81	J/mol×K	880.34	Joback Method
cpg	885.81	J/mol×K	921.29	Joback Method
cpg	901.78	J/mol×K	962.24	Joback Method
cpg	915.79	J/mol×K	1003.19	Joback Method
cpg	927.88	J/mol×K	1044.14	Joback Method
cpg	938.09	J/mol×K	1085.09	Joback Method
cpg	946.48	J/mol×K	1126.04	Joback Method
dvisc	0.0007646	Pa×s	513.18	Joback Method
dvisc	0.0003967	Pa×s	574.37	Joback Method
dvisc	0.0002335	Pa×s	635.57	Joback Method
dvisc	0.0001509	Pa×s	696.76	Joback Method
dvisc	0.0001046	Pa×s	757.95	Joback Method
dvisc	0.0000766	Pa×s	819.15	Joback Method
dvisc	0.0000586	Pa×s	880.34	Joback Method
hvapt	97.00	kJ/mol	433.00	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=C84617&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

Legend

chs:	Standard solid enthalpy of combustion
cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfs:	Solid phase enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
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