

10-Hydroxybenz[a]pyrene

Inchi:

lnchl=1S/C20H12O/c21-17-6-2-5-14-11-15-8-7-12-3-1-4-13-9-10-16(19(14)17)20(15)18

InchiKey:

ANHMWNGBSJFXSA-UHFFFAOYSA-N

Formula:

C20H12O

SMILES:

Oc1cccc2cc3ccc4cccc5ccc(c12)c3c45

Mol. weight [g/mol]:

268.31

Physical Properties

Property code	Value	Unit	Source
gf	467.26	kJ/mol	Joback Method
hf	287.50	kJ/mol	Joback Method
hfus	37.27	kJ/mol	Joback Method
hvap	83.31	kJ/mol	Joback Method
log10ws	-7.65		Crippen Method
logp	5.443		Crippen Method
mcvol	201.230	ml/mol	McGowan Method
pc	3055.79	kPa	Joback Method
rinpol	3187.00		NIST Webbook
tb	847.46	K	Joback Method
tc	1115.96	K	Joback Method
tf	627.94	K	Joback Method
vc	0.732	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	564.39	J/mol×K	847.46	Joback Method
cpg	577.50	J/mol×K	892.21	Joback Method
cpg	590.79	J/mol×K	936.96	Joback Method
cpg	604.63	J/mol×K	981.71	Joback Method
cpg	619.40	J/mol×K	1026.46	Joback Method
cpg	635.46	J/mol×K	1071.21	Joback Method
cpg	653.19	J/mol×K	1115.96	Joback Method
dvisc	0.0005224	Pa×s	627.94	Joback Method
dvisc	0.0003993	Pa×s	664.53	Joback Method

dvisc	0.0003139	Pa×s	701.11	Joback Method
dvisc	0.0002527	Pa×s	737.70	Joback Method
dvisc	0.0002077	Pa×s	774.29	Joback Method
dvisc	0.0001737	Pa×s	810.87	Joback Method
dvisc	0.0001476	Pa×s	847.46	Joback Method

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=R588600&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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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