Naphthalene, 1,2,3,4-tetrachloro-

Other names: 1,2,3,4-tetrachloronaphthalene
Inchi: InChI=1S/C10H4Cl4/c11-7-5-3-1-2-4-6(5)8(12)10(14)9(7)13/h1-4H
InchiKey: NAQWICRLNQSPPW-UHFFFAOYSA-N
Formula: C10H4Cl4
SMILES: Clc1c(Cl)c(Cl)c2ccccc2c1Cl
Mol. weight [g/mol]: 265.95
CAS: 20020-02-4

Physical Properties

Property code	Value	Unit	Source
gf	166.14	kJ/mol	Joback Method
hf	69.03	kJ/mol	Joback Method
hfus	10.53	kJ/mol	Evaluation of entropies of fusion of polychlorinated naphthalenes by model congeners: A DSC study
hvap	61.96	kJ/mol	Joback Method
log10ws	-6.02		Crippen Method
logp	5.453		Crippen Method
mcvol	157.500	ml/mol	McGowan Method
pc	3052.41	kPa	Joback Method
rinpol	2018.00		NIST Webbook
rinpol	2018.00		NIST Webbook
tb	643.50	K	Joback Method
tc	902.29	K	Joback Method
tf	431.34	K	Joback Method
vc	0.606	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	330.01	J/mol×K	859.16	Joback Method
cpg	335.52	J/mol×K	902.29	Joback Method
cpg	294.67	J/mol×K	643.50	Joback Method
cpg	303.01	J/mol×K	686.63	Joback Method

cpg	310.64	J/mol×K	729.76	Joback Method
cpg	317.64	J/mol×K	772.89	Joback Method
cpg	324.07	J/mol×K	816.03	Joback Method
dvisc	0.0003601	Pa×s	643.50	Joback Method
dvisc	0.0004112	Pa×s	608.14	Joback Method
dvisc	0.0011060	Pa×s	431.34	Joback Method
dvisc	0.0008546	Pa×s	466.70	Joback Method
dvisc	0.0006848	Pa×s	502.06	Joback Method
dvisc	0.0005649	Pa×s	537.42	Joback Method
dvisc	0.0004772	Pa×s	572.78	Joback Method
hfust	11.54	kJ/mol	470.80	NIST Webbook
hvapt	73.20	kJ/mol	373.00	NIST Webbook

Sources

Evaluation of entropies of fusion of polychlorinated naphthalenes by model congeners? A DSC study:	https://www.doi.org/10.1016/j.tca.2006.04.011
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=C20020024&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
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