Naphthalene, 1-(2-naphthalenylmethyl)-

Other names: Methane, 1-naphthyl-2-naphthyl-
(1-Naphthyl)(2-naphthyl)methane
1,2'-Dinaphthylmethane
Inchi: InChI=1S/C21H16/c1-2-8-19-14-16(12-13-17(19)6-1)15-20-10-5-9-18-7-3-4-11-21(18)20/
InchiKey: GPCYJQRKJVLCBS-UHFFFAOYSA-N
Formula: C21H16
SMILES: c1ccc2cc(Cc3cccc4ccccc34)ccc2c1
Mol. weight [g/mol]: 268.35
CAS: 611-48-3

Physical Properties

Property code	Value	Unit	Source
chs	-10712.40 ± 1.70	kJ/mol	NIST Webbook
chs	-10712.40 ± 1.70	kJ/mol	NIST Webbook
gf	544.80	kJ/mol	Joback Method
hf	355.49	kJ/mol	Joback Method
hfs	162.00 ± 1.90	kJ/mol	NIST Webbook
hfs	162.00 ± 1.90	kJ/mol	NIST Webbook
hfus	31.49	kJ/mol	Joback Method
hvap	71.50	kJ/mol	Joback Method
log10ws	-7.18		Crippen Method
logp	5.584		Crippen Method
mcvol	220.310	ml/mol	McGowan Method
pc	2241.88	kPa	Joback Method
tb	781.16	K	Joback Method
tc	1044.84	K	Joback Method
tf	469.71	K	Joback Method
tt	369.54 ± 0.02	K	NIST Webbook
vc	0.840	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	607.05	J/mol×K	781.16	Joback Method

cpg	623.40	J/mol×K	825.11	Joback Method
cpg	638.49	J/mol×K	869.05	Joback Method
cpg	652.54	J/mol×K	913.00	Joback Method
cpg	665.73	J/mol×K	956.95	Joback Method
cpg	678.29	J/mol×K	1000.89	Joback Method
cpg	690.41	J/mol×K	1044.84	Joback Method
dvisc	0.0013110	Pa×s	469.71	Joback Method
dvisc	0.0009229	Pa×s	521.62	Joback Method
dvisc	0.0006923	Pa×s	573.53	Joback Method
dvisc	0.0005447	Pa×s	625.44	Joback Method
dvisc	0.0004446	Pa×s	677.34	Joback Method
dvisc	0.0003735	Pa×s	729.25	Joback Method
dvisc	0.0003212	Pa×s	781.16	Joback Method
hfust	30.54	kJ/mol	369.60	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C611483&Units=SI
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

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
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
tt:	Triple Point Temperature
vc:	Critical Volume