Heptane, 1,1-diphenyl-

Other names:	1,1-Diphenylheptane
	Benzene, 1,1'-heptylidenebis-
Inchi:	InChI=1S/C19H24/c1-2-3-4-11-16-19(17-12-7-5-8-13-17)18-14-9-6-10-15-18/h5-10,12-15
InchiKey:	MZLKNWMNBXHXMA-UHFFFAOYSA-N
Formula:	C19H24
SMILES:	CCCCCCC(c1ccccc1)c1ccccc1
Mol. weight [g/mol]:	252.39
CAS:	1530-05-8

Physical Properties

Property code	Value	Unit	Source
gf	331.48	kJ/mol	Joback Method
hf	32.29	kJ/mol	Joback Method
hfus	29.52	kJ/mol	Joback Method
hvap	62.05	kJ/mol	Joback Method
log10ws	-6.05		Crippen Method
logp	5.789		Crippen Method
mcvol	231.050	ml/mol	McGowan Method
pc	1777.34	kPa	Joback Method
tb	506.00 ± 4.00	K	NIST Webbook
tc	908.97	K	Joback Method
tf	287.00 ± 4.00	K	NIST Webbook
tf	286.05 ± 0.50	K	NIST Webbook
tf	286.10 ± 1.00	K	NIST Webbook
tf	287.00 ± 2.00	K	NIST Webbook
vc	0.877	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	632.95	J/mol×K	687.04	Joback Method
cpg	652.77	J/mol×K	724.03	Joback Method
cpg	671.23	J/mol×K	761.02	Joback Method
cpg	688.40	J/mol×K	798.00	Joback Method

cpg	704.37	J/mol×K	834.99	Joback Method
cpg	719.21	J/mol×K	871.98	Joback Method
cpg	733.01	J/mol×K	908.97	Joback Method
dvisc	0.0026214	Pa×s	341.73	Joback Method
dvisc	0.0010346	Pa×s	399.28	Joback Method
dvisc	0.0005161	Pa×s	456.83	Joback Method
dvisc	0.0003008	Pa×s	514.38	Joback Method
dvisc	0.0001955	Pa×s	571.94	Joback Method
dvisc	0.0001374	Pa×s	629.49	Joback Method
dvisc	0.0001025	Pa×s	687.04	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.34455e+01
Coeff. B	-4.53529e+03
Coeff. C	-1.09938e+02
Temperature range (K), min.	454.62
Temperature range (K), max.	667.51

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C1530058&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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

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
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume