Octane, 1,8-diiodo-

Other names:	1,8-Diiodooctane
	Octamethylene diiodide
Inchi:	InChI=1S/C8H16I2/c9-7-5-3-1-2-4-6-8-10/h1-8H2
InchiKey:	KZDTZHQLABJVLE-UHFFFAOYSA-N
Formula:	C8H16I2
SMILES:	ICCCCCCCCI
Mol. weight [g/mol]:	366.02
CAS:	24772-63-2

Physical Properties

Property code	Value	Unit	Source
gf	132.72	kJ/mol	Joback Method
hf	-54.71	kJ/mol	Joback Method
hfus	25.29	kJ/mol	Joback Method
hvap	52.15	kJ/mol	Joback Method
log10ws	-5.07		Crippen Method
logp	4.197		Crippen Method
mcvol	175.220	ml/mol	McGowan Method
pc	2426.65	kPa	Joback Method
tb	568.72	K	Joback Method
tc	794.44	K	Joback Method
tf	296.04	K	Joback Method
vc	0.659	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	342.16	J/mol×K	568.72	Joback Method
cpg	354.83	J/mol×K	606.34	Joback Method
cpg	366.71	J/mol×K	643.96	Joback Method
cpg	377.87	J/mol×K	681.58	Joback Method
cpg	388.35	J/mol×K	719.20	Joback Method
cpg	398.21	J/mol×K	756.82	Joback Method
cpg	407.49	J/mol×K	794.44	Joback Method

dvisc	0.0047721	Pa×s	296.04	Joback Method
dvisc	0.0021491	Pa×s	341.49	Joback Method
dvisc	0.0011673	Pa×s	386.93	Joback Method
dvisc	0.0007208	Pa×s	432.38	Joback Method
dvisc	0.0004879	Pa×s	477.83	Joback Method
dvisc	0.0003534	Pa×s	523.27	Joback Method
dvisc	0.0002695	Pa×s	568.72	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	441.20	K	0.80	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.60436e+01
Coeff. B	-5.50026e+03
Coeff. C	-1.03710e+02
Temperature range (K), min.	452.80
Temperature range (K), max.	616.21

Sources

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=C24772632&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

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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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