Propane, 1,3-bis(methylthio)-

Other names:	1,3-Bis(methylsulfanyl)propane
	1,3-Bis(methylthio)propane
	2,6-Dithiaheptane
Inchi:	InChI=1S/C5H12S2/c1-6-4-3-5-7-2/h3-5H2,1-2H3
InchiKey:	JIZDZCFZPMIBPK-UHFFFAOYSA-N
Formula:	C5H12S2
SMILES:	CSCCCSC
Mol. weight [g/mol]:	136.28
CAS:	24949-35-7

Physical Properties

Property code	Value	Unit	Source
gf	57.46	kJ/mol	Joback Method
hf	-62.79	kJ/mol	Joback Method
hfus	16.97	kJ/mol	Joback Method
hvap	40.36	kJ/mol	Joback Method
log10ws	-1.68		Crippen Method
logp	2.103		Crippen Method
mcvol	114.010	ml/mol	McGowan Method
pc	3611.55	kPa	Joback Method
rinpol	1128.00		NIST Webbook
rinpol	1128.00		NIST Webbook
ripol	1554.00		NIST Webbook
tb	451.36	K	Joback Method
tc	666.63	K	Joback Method
tf	214.91	K	Joback Method
vc	0.423	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	213.79	J/mol×K	451.36	Joback Method
cpg	224.75	J/mol×K	487.24	Joback Method
cpg	235.26	J/mol×K	523.12	Joback Method

cpg	245.30	J/mol×K	558.99	Joback Method
cpg	254.88	J/mol×K	594.87	Joback Method
cpg	264.00	J/mol×K	630.75	Joback Method
cpg	272.66	J/mol×K	666.63	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	365.00	K	2.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.47108e+01
Coeff. B	-3.82417e+03
Coeff. C	-6.48600e+01
Temperature range (K), min.	330.00
Temperature range (K), max.	471.72

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C24949357&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
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
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume