

1,2-Bis(ethylthio)ethane

Other names:	3,6-Dithiaoctane Dimethylenebis[ethyl sulfide] Ethane, 1,2-bis(ethylthio)- Ethyl 2-(ethylthio)ethyl sulfide
Inchi:	InChI=1S/C6H14S2/c1-3-7-5-6-8-4-2/h3-6H2,1-2H3
InchiKey:	DCXDVGKTBDNYRX-UHFFFAOYSA-N
Formula:	C6H14S2
SMILES:	CCSCCSCC
Mol. weight [g/mol]:	150.31
CAS:	5395-75-5

Physical Properties

Property code	Value	Unit	Source
chl	-5423.37 ± 0.91	kJ/mol	NIST Webbook
gf	65.88	kJ/mol	Joback Method
hf	-83.00 ± 1.50	kJ/mol	NIST Webbook
hfl	-142.50 ± 1.50	kJ/mol	NIST Webbook
hfus	19.56	kJ/mol	Joback Method
hvap	59.50	kJ/mol	NIST Webbook
hvap	50.80 ± 0.20	kJ/mol	NIST Webbook
hvap	59.50 ± 0.10	kJ/mol	NIST Webbook
hvap	59.50	kJ/mol	NIST Webbook
hvap	59.50 ± 0.25	kJ/mol	NIST Webbook
log10ws	-2.10		Crippen Method
logp	2.493		Crippen Method
mcvol	128.100	ml/mol	McGowan Method
pc	3228.31	kPa	Joback Method
rinpol	1180.00		NIST Webbook
rinpol	1180.00		NIST Webbook
tb	474.24	K	Joback Method
tc	686.46	K	Joback Method
tf	226.18	K	Joback Method
vc	0.479	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	254.01	J/molxK	474.24	Joback Method
cpg	266.31	J/molxK	509.61	Joback Method
cpg	278.07	J/molxK	544.98	Joback Method
cpg	289.29	J/molxK	580.35	Joback Method
cpg	299.98	J/molxK	615.72	Joback Method
cpg	310.13	J/molxK	651.09	Joback Method
cpg	319.76	J/molxK	686.46	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.60411e+01
Coeff. B	-4.42805e+03
Coeff. C	-7.74120e+01
Temperature range (K), min.	358.49
Temperature range (K), max.	490.10

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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=C5395755&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

Legend

chl:	Standard liquid enthalpy of combustion
cpg:	Ideal gas heat capacity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase 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
rinpola:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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