

Ethyl n-octyl sulfide

Other names:	3-Thiaundecane
Inchi:	InChI=1S/C10H22S/c1-3-5-6-7-8-9-10-11-4-2/h3-10H2,1-2H3
InchiKey:	WAITXWGCJQLPGH-UHFFFAOYSA-N
Formula:	C10H22S
SMILES:	CCCCCCCCSCC
Mol. weight [g/mol]:	174.35
CAS:	3698-94-0

Physical Properties

Property code	Value	Unit	Source
gf	66.44	kJ/mol	Joback Method
hf	-207.86	kJ/mol	Joback Method
hfus	25.79	kJ/mol	Joback Method
hvap	44.67	kJ/mol	Joback Method
log10ws	-3.89		Crippen Method
logp	4.100		Crippen Method
mcvol	168.110	ml/mol	McGowan Method
pc	2141.36	kPa	Joback Method
rinpol	1293.00		NIST Webbook
tb	496.98	K	Joback Method
tc	678.93	K	Joback Method
tf	236.86	K	Joback Method
vc	0.649	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	375.94	J/mol×K	496.98	Joback Method
cpg	391.70	J/mol×K	527.30	Joback Method
cpg	406.81	J/mol×K	557.63	Joback Method
cpg	421.28	J/mol×K	587.95	Joback Method
cpg	435.13	J/mol×K	618.28	Joback Method
cpg	448.38	J/mol×K	648.60	Joback Method
cpg	461.02	J/mol×K	678.93	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.65879e+01
Coeff. B	-4.86959e+03
Coeff. C	-8.16900e+01
Temperature range (K), min.	380.43
Temperature range (K), max.	513.53

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=U343456&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/ci990307I
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
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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