Decane, 1,2-dibromo-

Other names: 1,2-Dibromodecane
Inchi: InChI=1S/C10H20Br2/c1-2-3-4-5-6-7-8-10(12)9-11/h10H,2-9H2,1H3
InchiKey: XBRBOTTWTQOCJH-UHFFFAOYSA-N
Formula: C10H20Br2
SMILES: CCCCCCCCC(Br)CBr
Mol. weight [g/mol]: 300.07
CAS: 28467-71-2

Physical Properties

Property code	Value	Unit	Source
gf	59.52	kJ/mol	Joback Method
hf	-202.35	kJ/mol	Joback Method
hfus	28.70	kJ/mol	Joback Method
hvap	50.34	kJ/mol	Joback Method
log10ws	-4.98		Crippen Method
logp	4.895		Crippen Method
mcvol	186.760	ml/mol	McGowan Method
pc	2421.88	kPa	Joback Method
tb	560.08	K	Joback Method
tc	755.21	K	Joback Method
tf	307.06	K	Joback Method
vc	0.714	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	486.62	J/mol×K	755.21	Joback Method
cpg	410.66	J/mol×K	560.08	Joback Method
cpg	425.07	J/mol×K	592.60	Joback Method
cpg	438.74	J/mol×K	625.12	Joback Method
cpg	451.69	J/mol×K	657.65	Joback Method
cpg	463.96	J/mol×K	690.17	Joback Method
cpg	475.59	J/mol×K	722.69	Joback Method
dvisc	0.0002299	Pa×s	560.08	Joback Method

dvisc	0.0035444	Pa×s	307.06	Joback Method
dvisc	0.0017060	Pa×s	349.23	Joback Method
dvisc	0.0009613	Pa×s	391.40	Joback Method
dvisc	0.0006056	Pa×s	433.57	Joback Method
dvisc	0.0004141	Pa×s	475.74	Joback Method
dvisc	0.0003012	Pa×s	517.91	Joback Method
hvapt	67.00	kJ/mol	446.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.54516e+01
Coeff. B	-4.73524e+03
Coeff. C	-8.67640e+01
Temperature range (K), min.	399.03
Temperature range (K), max.	553.74

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C28467712&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

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
hvapt:	Enthalpy of vaporization at a given temperature
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