Decane, 1,10-dibromo-

Other names:	1,10-Dibromodecane
	DECAMETHYLENE DIBROMIDE
	NSC 6086
	a,w-Dibromodecane
Inchi:	InChI=1S/C10H20Br2/c11-9-7-5-3-1-2-4-6-8-10-12/h1-10H2
InchiKey:	GTQHJCOHNAFHRE-UHFFFAOYSA-N
Formula:	C10H20Br2
SMILES:	BrCCCCCCCCCCBr
Mol. weight [g/mol]:	300.07
CAS:	4101-68-2

Physical Properties

Property code	Value	Unit	Source
gf	61.96	kJ/mol	Joback Method
hf	-197.07	kJ/mol	Joback Method
hfus	32.23	kJ/mol	Joback Method
hvap	50.72	kJ/mol	Joback Method
log10ws	-4.87		Crippen Method
logp	4.897		Crippen Method
mcvol	186.760	ml/mol	McGowan Method
pc	2402.92	kPa	Joback Method
rinpol	1735.00		NIST Webbook
tb	560.52	K	Joback Method
tc	751.80	K	Joback Method
tf	322.06	K	Joback Method
vc	0.720	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	410.32	J/mol×K	560.52	Joback Method
cpg	473.89	J/mol×K	719.92	Joback Method
cpg	462.46	J/mol×K	688.04	Joback Method
cpg	450.43	J/mol×K	656.16	Joback Method

cpg	437.75	J/mol×K	624.28	Joback Method
cpg	424.39	J/mol×K	592.40	Joback Method
cpg	484.74	J/mol×K	751.80	Joback Method
dvisc	0.0002450	Pa×s	560.52	Joback Method
dvisc	0.0003140	Pa×s	520.78	Joback Method
dvisc	0.0004192	Pa×s	481.03	Joback Method
dvisc	0.0005896	Pa×s	441.29	Joback Method
dvisc	0.0008871	Pa×s	401.55	Joback Method
dvisc	0.0014602	Pa×s	361.80	Joback Method
dvisc	0.0027180	Pa×s	322.06	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	433.20	K	2.00	NIST Webbook
tbrp	433.00	K	2.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.67728e+01
Coeff. B	-5.46929e+03
Coeff. C	-9.71500e+01
Temperature range (K), min.	428.92
Temperature range (K), max.	574.35

Sources

Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

Joback Method: https://en.wikipedia.org/wiki/Joback_method

KDB: https://www.cheric.org/files/research/kdb/mol/mol1651.mol

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

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C4101682&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
rinpol:	Non-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

Latest version available from:
https://www.chemeo.com/cid/14-398-5/Decane-1-10-dibromo.pdf
Generated by Cheméo on 2024-04-23 07:46:29.284323625 +0000 UTC m=+16147638.204900936.
Cheméo (https://www.chemeo.com) is the biggest free database of chemical and physical data for the process industry.