Cyclodecane, methyl-

Other names: Methylcyclodecane
Inchi: InChI=1S/C11H22/c1-11-9-7-5-3-2-4-6-8-10-11/h11H,2-10H2,1H3
InchiKey: WFWNFBYXZQJMFM-UHFFFAOYSA-N
Formula: C11H22
SMILES: CC1CCCCCCCCC1
Mol. weight [g/mol]: 154.29
CAS: 13151-43-4

Physical Properties

Property code	Value	Unit	Source
gf	17.79	kJ/mol	Joback Method
hf	-240.69	kJ/mol	Joback Method
hfus	7.68	kJ/mol	Joback Method
hvap	41.20	kJ/mol	Joback Method
log10ws	-4.08		Crippen Method
logp	4.147		Crippen Method
mcvol	154.990	ml/mol	McGowan Method
pc	2579.34	kPa	Joback Method
rinpol	1195.00		NIST Webbook
rinpol	1202.00		NIST Webbook
rinpol	1195.00		NIST Webbook
tb	487.71	K	Joback Method
tc	714.38	K	Joback Method
tf	207.03	K	Joback Method
vc	0.552	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	348.47	J/mol×K	487.71	Joback Method
cpg	373.55	J/mol×K	525.49	Joback Method
cpg	397.33	J/mol×K	563.27	Joback Method
cpg	419.81	J/mol×K	601.05	Joback Method
cpg	441.00	J/mol×K	638.82	Joback Method

cpg	460.91	J/mol×K	676.60	Joback Method
cpg	479.53	J/mol×K	714.38	Joback Method
dvisc	0.0751750	Pa×s	207.03	Joback Method
dvisc	0.0094962	Pa×s	253.81	Joback Method
dvisc	0.0022840	Pa×s	300.59	Joback Method
dvisc	0.0008064	Pa×s	347.37	Joback Method
dvisc	0.0003645	Pa×s	394.15	Joback Method
dvisc	0.0001950	Pa×s	440.93	Joback Method
dvisc	0.0001176	Pa×s	487.71	Joback Method

Sources

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=C13151434&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume