

Cyclooctanecarboxaldehyde

Other names:	cyclooctanecarbaldehyde
Inchi:	InChI=1S/C9H16O/c10-8-9-6-4-2-1-3-5-7-9/h8-9H,1-7H2
InchiKey:	IGGUWVNICWZJQU-UHFFFAOYSA-N
Formula:	C9H16O
SMILES:	O=CC1CCCCCCC1
Mol. weight [g/mol]:	140.22
CAS:	6688-11-5

Physical Properties

Property code	Value	Unit	Source
gf	-74.37	kJ/mol	Joback Method
hf	-272.67	kJ/mol	Joback Method
hfus	8.99	kJ/mol	Joback Method
hvap	43.12	kJ/mol	Joback Method
log10ws	-2.52		Crippen Method
logp	2.546		Crippen Method
mcvol	128.380	ml/mol	McGowan Method
pc	3254.14	kPa	Joback Method
tb	482.07	K	Joback Method
tc	703.27	K	Joback Method
tf	233.53	K	Joback Method
vc	0.473	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	282.58	J/molxK	482.07	Joback Method
cpg	301.81	J/molxK	518.94	Joback Method
cpg	320.00	J/molxK	555.80	Joback Method
cpg	337.18	J/molxK	592.67	Joback Method
cpg	353.36	J/molxK	629.53	Joback Method
cpg	368.54	J/molxK	666.40	Joback Method
cpg	382.74	J/molxK	703.27	Joback Method
dvisc	0.0155416	Paxs	233.53	Joback Method

dvisc	0.0045576	Paxs	274.95	Joback Method
dvisc	0.0018429	Paxs	316.38	Joback Method
dvisc	0.0009190	Paxs	357.80	Joback Method
dvisc	0.0005294	Paxs	399.22	Joback Method
dvisc	0.0003383	Paxs	440.65	Joback Method
dvisc	0.0002335	Paxs	482.07	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	369.20	K	2.00	NIST Webbook

Sources

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=C6688115&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071

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
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature

tf: Normal melting (fusion) point

vc: Critical Volume

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