2-C3H7+

Inchi: InChI=1S/C3H7/c1-3-2/h3H,1-2H3/q+1
InchiKey: MONCCXHJSVPFQF-UHFFFAOYSA-N
Formula: C3H7+
SMILES: C[CH3+]C
Mol. weight [g/mol]: 43.09
CAS: 19252-53-0

Physical Properties

Property code	Value	Unit	Source
gf	-78.00	kJ/mol	Joback Method
hf	-161.06	kJ/mol	Joback Method
hfus	1.84	kJ/mol	Joback Method
hvap	22.42	kJ/mol	Joback Method
log10ws	-1.13		Crippen Method
logp	1.539		Crippen Method
mcvol	55.280	ml/mol	McGowan Method
pc	4162.33	kPa	Joback Method
tb	268.74	K	Joback Method
tc	431.34	K	Joback Method
tf	107.20	K	Joback Method
vc	0.212	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	73.77	J/mol×K	268.74	Joback Method
cpg	79.30	J/mol×K	295.84	Joback Method
cpg	84.82	J/mol×K	322.94	Joback Method
cpg	90.32	J/mol×K	350.04	Joback Method
cpg	95.79	J/mol×K	377.14	Joback Method
cpg	101.22	J/mol×K	404.24	Joback Method
cpg	106.60	J/mol×K	431.34	Joback Method
dvisc	0.0618682	Pa×s	107.20	Joback Method
dvisc	0.0087091	Pa×s	134.12	Joback Method

dvisc	0.0023615	Pa×s	161.05	Joback Method
dvisc	0.0009306	Pa×s	187.97	Joback Method
dvisc	0.0004631	Pa×s	214.89	Joback Method
dvisc	0.0002692	Pa×s	241.82	Joback Method
dvisc	0.0001745	Pa×s	268.74	Joback Method

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=C19252530&Units=SI
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume