Ether, sec-butyl isopropyl

Other names: Sec-butyl isopropyl ether
Inchi: InChI=1S/C7H16O/c1-5-7(4)8-6(2)3/h6-7H,5H2,1-4H3
InchiKey: QHJLNXCHSKDYHR-UHFFFAOYSA-N
Formula: C7H16O
SMILES: CCC(C)OC(C)C
Mol. weight [g/mol]: 116.20
CAS: 18641-81-1

Physical Properties

Property code	Value	Unit	Source
gf	-101.82	kJ/mol	Joback Method
hf	-330.59	kJ/mol	Joback Method
hfus	8.03	kJ/mol	Joback Method
hvap	37.58	kJ/mol	NIST Webbook
log10ws	-2.06		Crippen Method
logp	2.210		Crippen Method
mcvol	115.360	ml/mol	McGowan Method
pc	2796.51	kPa	Joback Method
tb	373.20	K	NIST Webbook
tc	553.18	K	Joback Method
tf	160.88	K	Joback Method
vc	0.433	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	285.76	J/mol×K	553.18	Joback Method
cpg	218.23	J/mol×K	381.10	Joback Method
cpg	230.43	J/mol×K	409.78	Joback Method
cpg	242.25	J/mol×K	438.46	Joback Method
cpg	253.69	J/mol×K	467.14	Joback Method
cpg	264.76	J/mol×K	495.82	Joback Method
cpg	275.45	J/mol×K	524.50	Joback Method
dvisc	0.0002095	Pa×s	381.10	Joback Method

dvisc	0.0138704	Pa×s	160.88	Joback Method
dvisc	0.0036036	Pa×s	197.58	Joback Method
dvisc	0.0014282	Pa×s	234.29	Joback Method
dvisc	0.0007273	Pa×s	270.99	Joback Method
dvisc	0.0004351	Pa×s	307.69	Joback Method
dvisc	0.0002904	Pa×s	344.40	Joback Method
hvapt	32.38	kJ/mol	373.20	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=C18641811&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
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
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume