

Methyl peroxide

Inchi:

InChI=1S/CH4O2/c1-3-2/h2H,1H3

InchiKey:

MEUKEBNAABNAEX-UHFFFAOYSA-N

Formula:

CH4O2

SMILES:

COO

Mol. weight [g/mol]:

48.04

CAS:

3031-73-0

Physical Properties

Property code	Value	Unit	Source
gf	-284.28	kJ/mol	Joback Method
hf	-131.00	kJ/mol	NIST Webbook
hfus	3.62	kJ/mol	Joback Method
hvap	35.00	kJ/mol	NIST Webbook
log10ws	0.36		Crippen Method
logp	0.106		Crippen Method
mcvol	36.690	ml/mol	McGowan Method
pc	6514.14	kPa	Joback Method
tb	336.88	K	Joback Method
tc	499.60	K	Joback Method
tf	184.08	K	Joback Method
vc	0.129	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	74.51	J/mol×K	499.60	Joback Method
cpg	72.15	J/mol×K	472.48	Joback Method
cpg	69.78	J/mol×K	445.36	Joback Method
cpg	67.39	J/mol×K	418.24	Joback Method
cpg	65.00	J/mol×K	391.12	Joback Method
cpg	62.60	J/mol×K	364.00	Joback Method
cpg	60.20	J/mol×K	336.88	Joback Method
dvisc	0.1013468	Pa×s	184.08	Joback Method
dvisc	0.0004000	Pa×s	336.88	Joback Method

dvisc	0.0006900	Pa×s	311.41	Joback Method
dvisc	0.0013118	Pa×s	285.95	Joback Method
dvisc	0.0028276	Pa×s	260.48	Joback Method
dvisc	0.0071987	Pa×s	235.01	Joback Method
dvisc	0.0230007	Pa×s	209.55	Joback Method
hvapt	37.70	kJ/mol	283.00	NIST Webbook

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.cheméo.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=C3031730&Units=SI

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

Latest version available from:

<https://www.cheméo.com/cid/71-121-8/Methyl-peroxide.pdf>

Generated by Cheméo on 2025-12-05 13:58:29.51337448 +0000 UTC m=+4691307.043415144.

Cheméo (<https://www.cheméo.com>) is the biggest free database of chemical and physical data for the process industry.