

# Methanesulfonic acid, methyl ester

<b>Other names:</b>	Methyl methanesulfonate MMS as-Dimethyl sulphite CB 1540 FDA 0092 Methyl ester of methanesulfonic acid Methyl mesylate Methyl methansulfonate Methylmethansulfonat NSC-50256 Methanesulphonic acid methyl ester Methylester kyseliny methansulfonove Methyl ester of methanesulphonic acid Methyl methanesulphonate Methyl methansulphonate
<b>Inchi:</b>	InChI=1S/C2H6O3S/c1-5-6(2,3)4/h1-2H3
<b>InchiKey:</b>	MBABOKRGFJTBAE-UHFFFAOYSA-N
<b>Formula:</b>	C2H6O3S
<b>SMILES:</b>	COS(C)(=O)=O
<b>Mol. weight [g/mol]:</b>	110.13
<b>CAS:</b>	66-27-3

## Physical Properties

Property code	Value	Unit	Source
gf	-607.58	kJ/mol	Joback Method
hf	-670.18	kJ/mol	Joback Method
hfus	13.50	kJ/mol	Joback Method
hvap	41.09	kJ/mol	Joback Method
log10ws	0.43		Crippen Method
logp	-0.408		Crippen Method
mcvol	73.000	ml/mol	McGowan Method
pc	6180.53	kPa	Joback Method
rinpol	131.02		NIST Webbook
tb	315.36	K	Joback Method
tc	478.40	K	Joback Method
tf	173.09	K	Joback Method
vc	0.291	m3/kmol	Joback Method

# Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	117.41	J/mol×K	315.36	Joback Method
cpg	122.58	J/mol×K	342.53	Joback Method
cpg	127.72	J/mol×K	369.71	Joback Method
cpg	132.83	J/mol×K	396.88	Joback Method
cpg	137.89	J/mol×K	424.05	Joback Method
cpg	142.88	J/mol×K	451.23	Joback Method
cpg	147.80	J/mol×K	478.40	Joback Method

## Sources

Crippen Method:	<a href="http://pubs.acs.org/doi/abs/10.1021/ci990307l">http://pubs.acs.org/doi/abs/10.1021/ci990307l</a>
Crippen Method:	<a href="https://www.chemeo.com/doc/models/crippen_log10ws">https://www.chemeo.com/doc/models/crippen_log10ws</a>
Joback Method:	<a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>
McGowan Method:	<a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>
NIST Webbook:	<a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C66273&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C66273&amp;Units=SI</a>

## Legend

cpg:	Ideal gas heat capacity
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
rinpolt:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point

**vc:**

Critical Volume

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