

# Sulfur tetrafluoride oxide

<b>Other names:</b>	Sulfur fluoride oxide (SF4O) Thionyl tetrafluoride SOF4
<b>Inchi:</b>	InChI=1S/F4OS/c1-6(2,3,4)5
<b>InchiKey:</b>	DUGWRBKBGKTKOX-UHFFFAOYSA-N
<b>Formula:</b>	F4OS
<b>SMILES:</b>	O=S(F)(F)(F)F
<b>Mol. weight [g/mol]:</b>	124.06
<b>CAS:</b>	13709-54-1

## Physical Properties

Property code	Value	Unit	Source
gf	-1152.59	kJ/mol	Joback Method
hf	-1145.13	kJ/mol	Joback Method
hfus	12.47	kJ/mol	Joback Method
hvap	25.35	kJ/mol	Joback Method
ie	12.30	eV	NIST Webbook
ie	12.80 ± 0.10	eV	NIST Webbook
log10ws	-0.95		Crippen Method
logp	1.345		Crippen Method
mcvol	44.460	ml/mol	McGowan Method
pc	5102.04	kPa	Joback Method
tb	256.16	K	Joback Method
tc	395.83	K	Joback Method
vc	0.215	m3/kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	88.00	J/molxK	372.55	Joback Method
cpg	82.04	J/molxK	256.16	Joback Method
cpg	82.80	J/molxK	279.44	Joback Method
cpg	83.80	J/molxK	302.72	Joback Method
cpg	85.01	J/molxK	326.00	Joback Method

cpg	86.41	J/mol×K	349.27	Joback Method
cpg	89.73	J/mol×K	395.83	Joback Method
hvapt	21.40	kJ/mol	203.00	NIST Webbook

## Sources

<b>Crippen Method:</b>	<a href="https://www.chemeo.com/doc/models/crippen_log10ws">https://www.chemeo.com/doc/models/crippen_log10ws</a>
<b>Joback Method:</b>	<a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>
<b>McGowan Method:</b>	<a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>
<b>NIST Webbook:</b>	<a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C13709541&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C13709541&amp;Units=SI</a>
<b>Crippen Method:</b>	<a href="http://pubs.acs.org/doi/abs/10.1021/ci9903071">http://pubs.acs.org/doi/abs/10.1021/ci9903071</a>

## Legend

<b>cpg:</b>	Ideal gas heat capacity
<b>gf:</b>	Standard Gibbs free energy of formation
<b>hf:</b>	Enthalpy of formation at standard conditions
<b>hfus:</b>	Enthalpy of fusion at standard conditions
<b>hvap:</b>	Enthalpy of vaporization at standard conditions
<b>hvapt:</b>	Enthalpy of vaporization at a given temperature
<b>ie:</b>	Ionization energy
<b>log10ws:</b>	Log10 of Water solubility in mol/l
<b>logp:</b>	Octanol/Water partition coefficient
<b>mcvol:</b>	McGowan's characteristic volume
<b>pc:</b>	Critical Pressure
<b>tb:</b>	Normal Boiling Point Temperature
<b>tc:</b>	Critical Temperature
<b>vc:</b>	Critical Volume

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