

Chlorine monofluoride

Inchi:	InChI=1S/ClF/c1-2
InchiKey:	OMRRUNXAWXNVFW-UHFFFAOYSA-N
Formula:	ClF
SMILES:	FCl
Mol. weight [g/mol]:	54.45
CAS:	7790-89-8

Physical Properties

Property code	Value	Unit	Source
hfus	3.03	kJ/mol	Joback Method
ie	12.52	eV	Cheméo Relay (1.0)
logp	1.110		Crippen Method
mcvol	24.870	ml/mol	McGowan Method
tb	163.83	K	Cheméo Relay (1.0)
tf	116.13	K	Cheméo Relay (1.0)

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	26.48	J/mol×K	236.10	Joback Method
cpg	26.91	J/mol×K	261.86	Joback Method
cpg	27.32	J/mol×K	287.62	Joback Method
cpg	27.72	J/mol×K	313.37	Joback Method
cpg	28.10	J/mol×K	339.13	Joback Method
cpg	28.48	J/mol×K	364.89	Joback Method
cpg	28.84	J/mol×K	390.65	Joback Method

Correlations

Information	Value
Property code	pvap

Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.38871e+01
Coeff. B	-1.48328e+03
Coeff. C	-2.33800e+01
Temperature range (K), min.	115.00
Temperature range (K), max.	300.00

Sources

The Yaws Handbook of Vapor Pressure:
NIST Webbook:

<https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>
<http://webbook.nist.gov/cgi/cbook.cgi?ID=C7790898&Units=SI>

Joback Method:

https://en.wikipedia.org/wiki/Joback_method

McGowan Method:

<http://link.springer.com/article/10.1007/BF02311772>

Crippen Method:

<http://pubs.acs.org/doi/abs/10.1021/ci990307l>

Crippen Method:

https://www.chemeo.com/doc/models/crippen_log10ws

Cheméo Relay (1.0):

Cheméo Relay (1.0, beta):

Legend

cpg:	Ideal gas heat capacity
hfus:	Enthalpy of fusion at standard conditions
ie:	Ionization energy
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tf:	Normal melting (fusion) point

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