

2-Trifluoromethylbenzoic acid, 2-chlorophenyl ester

Inchi:	InChI=1S/C14H8ClF3O2/c15-11-7-3-4-8-12(11)20-13(19)9-5-1-2-6-10(9)14(16,17)18/h1-
InchiKey:	DHZKNOQRWOHLKU-UHFFFAOYSA-N
Formula:	C14H8ClF3O2
SMILES:	O=C(Oc1ccccc1Cl)c1ccccc1C(F)(F)F
Mol. weight [g/mol]:	300.66

Physical Properties

Property code	Value	Unit	Source
gf	-554.88	kJ/mol	Joback Method
hf	-739.79	kJ/mol	Joback Method
hfus	28.13	kJ/mol	Joback Method
hvap	62.43	kJ/mol	Joback Method
log10ws	-5.35		Crippen Method
logp	4.578		Crippen Method
mcvol	185.590	ml/mol	McGowan Method
pc	2410.00	kPa	Joback Method
rinpol	1830.00		NIST Webbook
rinpol	1830.00		NIST Webbook
tb	691.34	K	Joback Method
tc	919.23	K	Joback Method
tf	431.69	K	Joback Method
vc	0.720	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	465.51	J/mol×K	691.34	Joback Method
cpg	477.56	J/mol×K	729.32	Joback Method
cpg	488.56	J/mol×K	767.30	Joback Method
cpg	498.59	J/mol×K	805.28	Joback Method
cpg	507.70	J/mol×K	843.27	Joback Method
cpg	515.95	J/mol×K	881.25	Joback Method
cpg	523.41	J/mol×K	919.23	Joback Method

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=U299011&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
hvp:	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
rinp:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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