

4-Stilbene carboxaldehyde

Other names:	Benzaldehyde,4-(2-phenylethenyl)-
Inchi:	InChI=1S/C15H12O/c16-12-15-10-8-14(9-11-15)7-6-13-4-2-1-3-5-13/h1-12H/b7-6+
InchiKey:	CLXSBHRRZNBTRT-VOTSOKGWSA-N
Formula:	C15H12O
SMILES:	O=Cc1ccc(C=Cc2ccccc2)cc1
Mol. weight [g/mol]:	208.26
CAS:	32555-96-7

Physical Properties

Property code	Value	Unit	Source
gf	271.31	kJ/mol	Joback Method
hf	140.30	kJ/mol	Joback Method
hfus	24.79	kJ/mol	Joback Method
hvap	60.88	kJ/mol	Joback Method
log10ws	-4.32		Crippen Method
logp	3.670		Crippen Method
mcvol	171.960	ml/mol	McGowan Method
pc	2814.34	kPa	Joback Method
tb	653.76	K	Joback Method
tc	901.06	K	Joback Method
tf	361.09	K	Joback Method
vc	0.656	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	418.66	J/molxK	653.76	Joback Method
cpg	433.75	J/molxK	694.98	Joback Method
cpg	447.59	J/molxK	736.19	Joback Method
cpg	460.28	J/molxK	777.41	Joback Method
cpg	471.93	J/molxK	818.63	Joback Method
cpg	482.63	J/molxK	859.85	Joback Method
cpg	492.49	J/molxK	901.06	Joback Method
dvisc	0.0017291	Paxs	361.09	Joback Method

dvisc	0.0009222	Paxs	409.87	Joback Method
dvisc	0.0005622	Paxs	458.65	Joback Method
dvisc	0.0003769	Paxs	507.43	Joback Method
dvisc	0.0002711	Paxs	556.20	Joback Method
dvisc	0.0002056	Paxs	604.98	Joback Method
dvisc	0.0001625	Paxs	653.76	Joback Method

Sources

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=C32555967&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

Legend

cp_g:	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
h_{vap}:	Enthalpy of vaporization at standard conditions
log₁₀ws:	Log ₁₀ 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

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