2,4,8,10-Tetraoxaspiro[5.5]undecane, 3,9-diethenyl-

Other names: 2,4,8,10-Tetraoxaspiro[5.5]undecane, 3,9-divinyl-
Acrolein pentaerythritol bisacetal
Acrolein-pentaerythritol dicyclic acetal
Acrolein, cyclic diacetal with pentaerythritol
Acrolein, cyclic neopentanetetrayl acetal
Diallylidene pentaerythritol
3,9-Divinyl-2,4,8,10-tetraoxaspiro[5.5]undecane
3,9-Divinyl-2,4,8,10,tetraoxaspiro(5,5)undecane
3,9-Divinylspirobi(m-dioxane)
NSC 7585
Pentaerythritol diacrolein acetal

Inchi: InChI=1S/C11H16O4/c1-3-9-12-5-11(6-13-9)7-14-10(4-2)15-8-11/h3-4,9-10H,1-2,5-8H2

InchiKey: OOXMQACSWCZQLX-UHFFFAOYSA-N

Formula: C11H16O4

SMILES: C=CC1OCC2(CO1)COC(C=C)OC2

Mol. weight [g/mol]: 212.24

CAS: 78-19-3

Physical Properties

Property code	Value	Unit	Source
gf	-79.26	kJ/mol	Joback Method
hf	-437.81	kJ/mol	Joback Method
hfus	34.14	kJ/mol	Joback Method
hvap	56.01	kJ/mol	Joback Method
log10ws	-1.25		Crippen Method
logp	1.091		Crippen Method
mcvol	159.010	ml/mol	McGowan Method
pc	2989.32	kPa	Joback Method
tb	582.64	K	Joback Method
tc	820.23	K	Joback Method
tf	354.43	K	Joback Method
vc	0.569	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	431.61	J/mol×K	582.64	Joback Method
cpg	450.90	J/mol×K	622.24	Joback Method
cpg	468.84	J/mol×K	661.84	Joback Method
cpg	485.58	J/mol×K	701.44	Joback Method
cpg	501.30	J/mol×K	741.04	Joback Method
cpg	516.16	J/mol×K	780.63	Joback Method
cpg	530.31	J/mol×K	820.23	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	382.20	K	0.30	NIST Webbook

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=C78193&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
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
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume