Betamethasone dipropionate

Other names:

Pregna-1,4-diene-3,20-dione, 9-fluoro-11-«beta»,17,21-trihydroxy-16-«beta»-methyl-,17,21-dipropionate

Diprolene

Pregna-1,4-diene-3,20-dione, 9-fluoro-11-hydroxy-16-methyl-17,21-bis(1-oxopropoxy)-, (11«beta»,16«beta»)-

Betamethasone 17,21-dipropionate

Diprosone

S-3440

9-Fluoro-11«beta»,17,21-trihydroxy-16«beta»-methylpregna-1,4-diene-3,20-dione 17,21-dipropionate

(11«beta»,16«beta»)-9-Fluoro-11,17,21-trihydroxy-16-methylpregna-1,4-diene-3,20-dione 17,21-dipropionate

Diproderm

Diprophos

Diprosis

Maxivate

Psorion

Rinderon-DP

Sch-11460

Inchi: InChI=1S/C28H37FO7/c1-6-23(33)35-15-22(32)28(36-24(34)7-2)16(3)12-20-19-9-8-17-1

InchiKey: CIWBQSYVNNPZIQ-KLRSCUJKSA-N

Formula: C28H37FO7

SMILES: CCC(=O)OCC(=O)C1(OC(=O)CC)C(C)CC2C3CCC4=CC(=O)C=CC4(C)C3(F)C(O)CC21

Mol. weight [g/mol]: 504.59

CAS: 5593-20-4

Physical Properties

Property code	Value	Unit	Source
gf	-686.11	kJ/mol	Joback Method
hf	-1365.38	kJ/mol	Joback Method
hfus	45.31	kJ/mol	Joback Method
hvap	119.01	kJ/mol	Joback Method
log10ws	-5.36		Crippen Method
logp	3.817		Crippen Method
mcvol	379.000	ml/mol	McGowan Method
pc	1173.63	kPa	Joback Method
tb	1239.65	K	Joback Method
tc	1522.41	K	Joback Method
tf	876.04	K	Joback Method
vc	1.450	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1708.55	J/mol×K	1239.65	Joback Method
cpg	1786.54	J/mol×K	1286.78	Joback Method
cpg	1873.02	J/mol×K	1333.90	Joback Method
cpg	1968.84	J/mol×K	1381.03	Joback Method
cpg	2074.89	J/mol×K	1428.16	Joback Method
cpg	2192.05	J/mol×K	1475.29	Joback Method
cpg	2321.20	J/mol×K	1522.41	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C5593204&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method: https://en.wikipedia.org/wiki/Joback_method

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
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume