

Want:		Given	T0	298 K
a	1.471162787		P	50 atm

b	0.11491999
c	0.379338596
d	0.298997234

		(T/1000)	(T/1000)^2	
CpH2O	29.182	14.503	-2.0235	
CpO2	28.186	6.3011	-0.74986	
CpH2	26.896	4.3501	-0.32674	
		T^(-0.25)	T^(-0.75)	T
CpOH	81.55	-15.01	0.313	-0.02

to get a and b

a	b	kp3	kp4	constraint
1.471162787	0.11491999	1.432042359	3.663596	0.043594

Tc	Kp3	Kp4	a	b	enthH2O	enthO2	enthH2	enthOH	enth_sum
3584.516761	1.432042359	3.663596384	1.471163	0.11492	-79461	15918.64	48882.09	14660.3	9.31512E-07

n	2.264418607
0.649614871	0.050785663
0.16737188	0.132043
molecular weight	15.89767894

all Cp	
h20	55.1687799
o2	41.13762708
h20	38.29080239
oh	7.920468592
cp_total	142.517678
gamma	1.061950612

c*	1328.605425
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