Predict2000 Plus

Compound's T Correlated Parameters in DB

File Help

All Temperature Correlated Parameters and Sources Currently Stored in the Database for:

ETHANOL C2H6O

Delete Property

Property	Liquid Density	Free Energy of Form	Heat of Form	Heat of Vap
Units	kmol/m^3	J/kmol	J/kmol	J/kmol
Equation No.	104	101	101	102
Source	SystemDB	SystemDB	SystemDB	SystemDB
Date Entered	01.26.01	01.26.01	01.26.01	01.26.01
Reference	1	1	1	1
Tmin K	159,05	298	298	300
Tmax K	516,25	1000	1000	516,25
A	5,767505911	-236100000	-216960000	43122000
B	0,26395	219040	-69572	516,25
C	516,25	25,659	31,744	0,079
D	0,2367	0	0	0
E	0	0	0	0

All Compound's Properties in DB

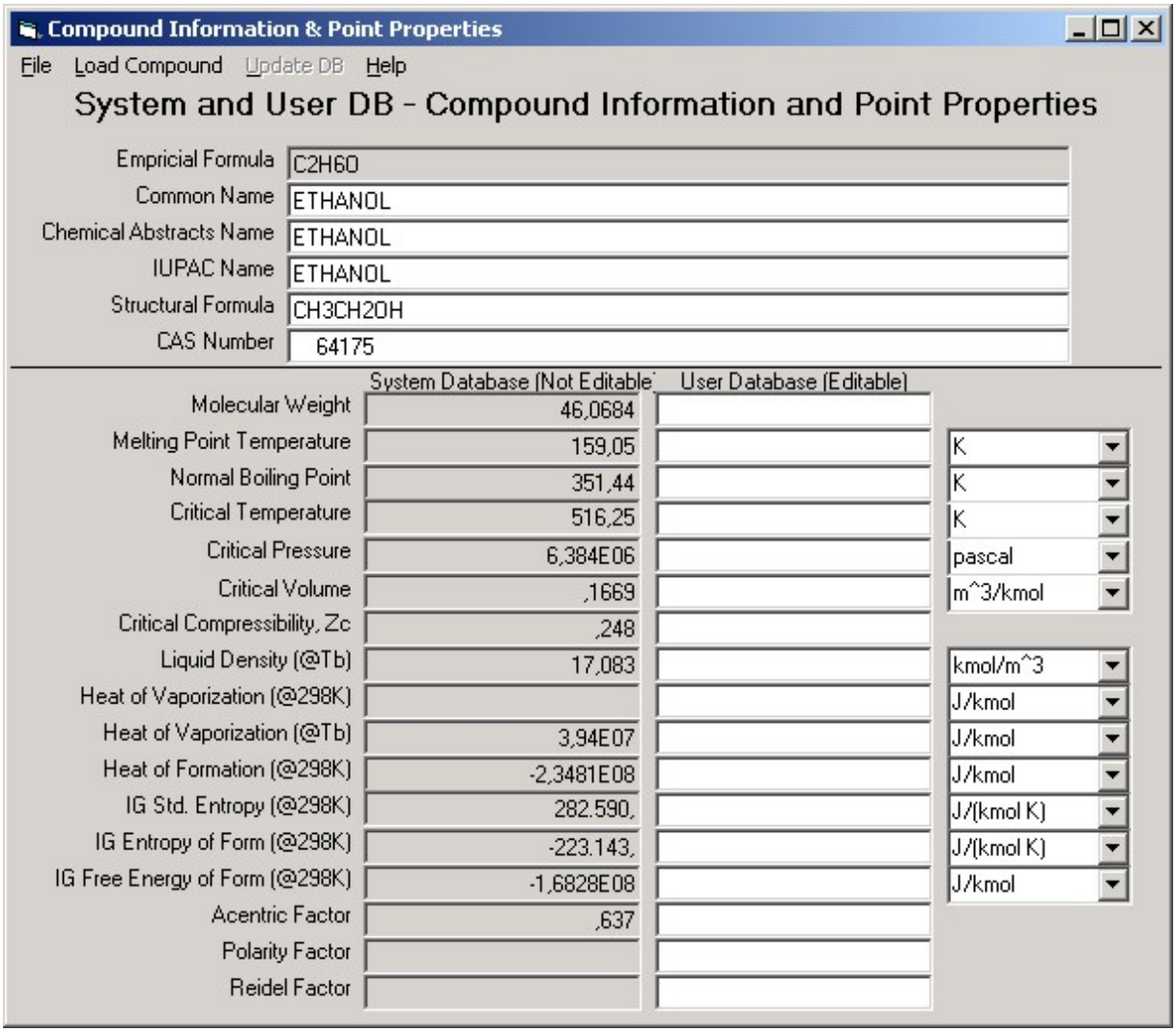
File Help

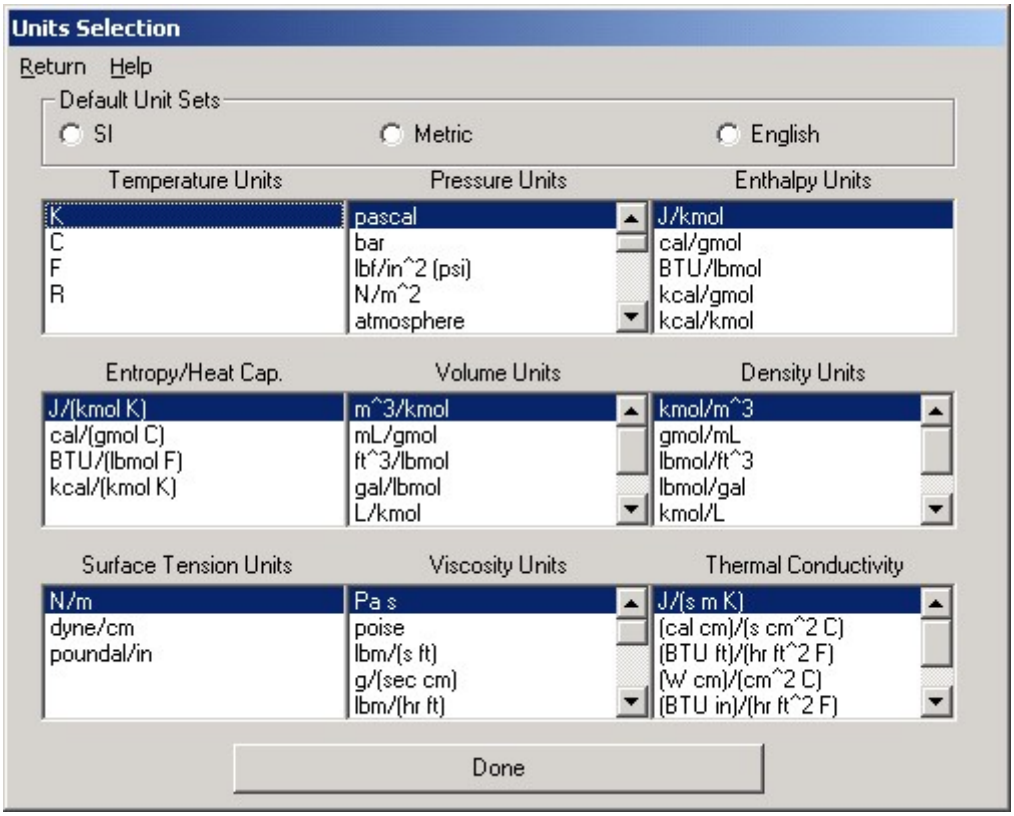
All Properties and Sources Currently Stored in the Database for:

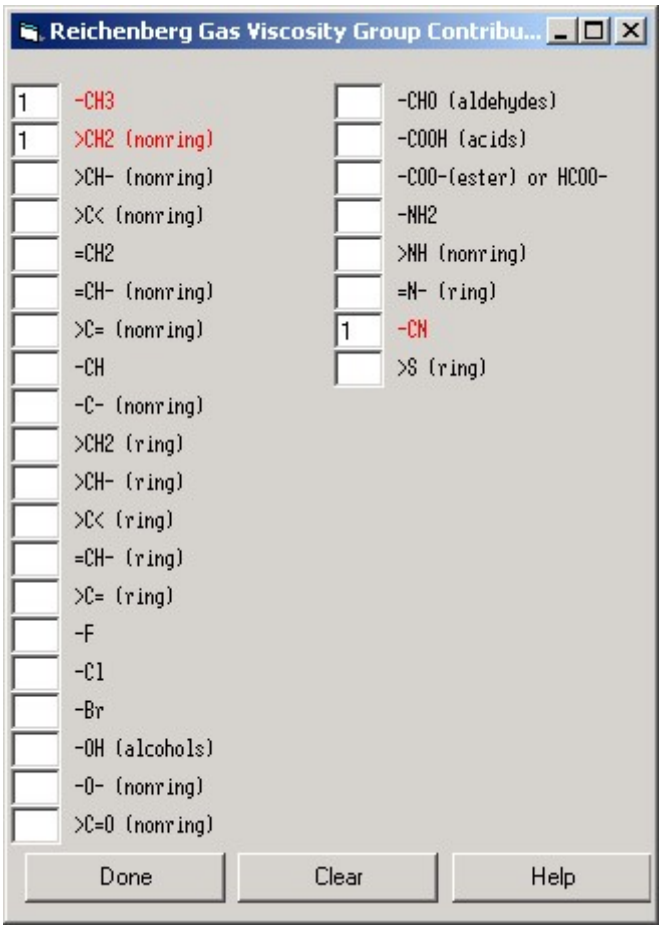
ETHANOL C2H6O

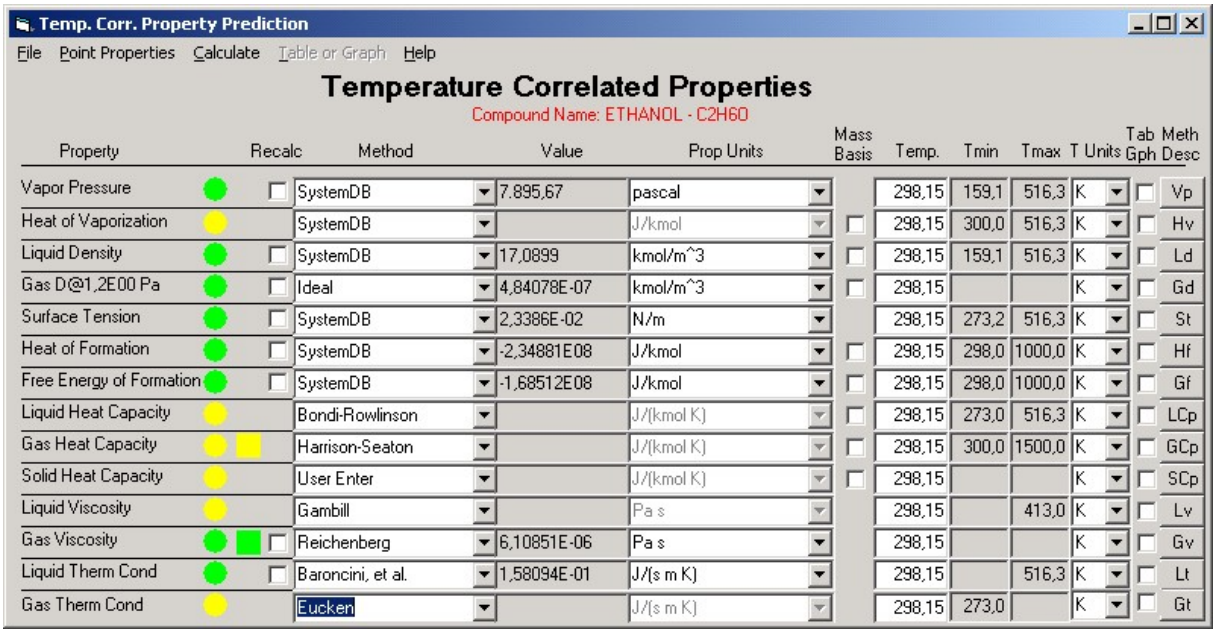
Delete Selected Prop.

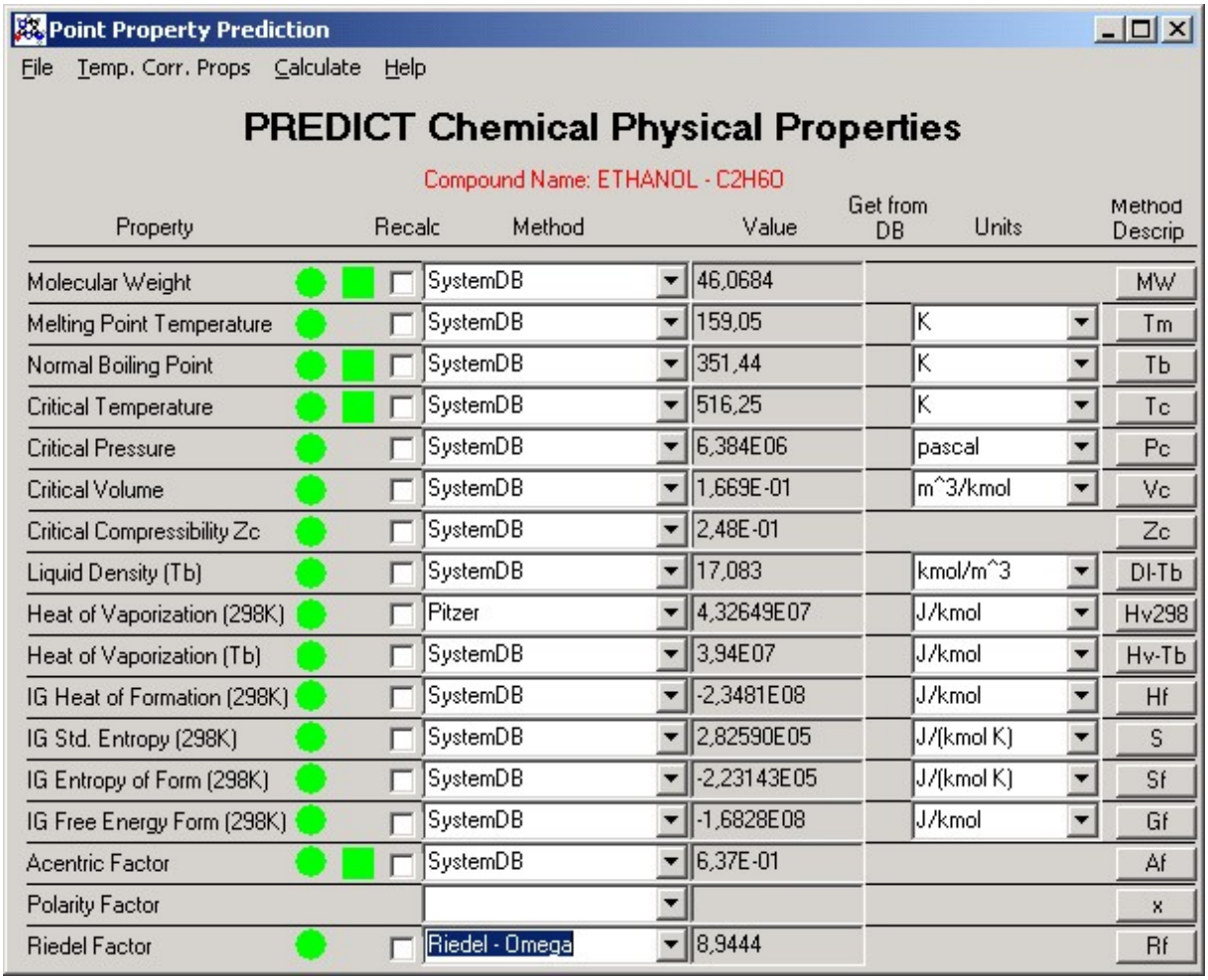
Property	Value	Units	Source	Date Entered	Ref.
Ac	,637		SystemDB	04.13.00	1
Atoms	9,		SystemDB	04.13.00	1
Dl	17,083	kmol/m^3	SystemDB	10.29.00	1
Gf	-1,6828E08	J/kmol	SystemDB	10.29.00	1
Hf	-2,3481E08	J/kmol	SystemDB	10.29.00	1
Hvb	3,94E07	J/kmol	SystemDB	10.29.00	1
MW	46,0684		SystemDB	04.13.00	1
Pc	6,384E06	pascal	SystemDB	04.13.00	1
S	282.590,	J/kmol K	SystemDB	10.29.00	1
Sf	-223.143,	J/kmol K	SystemDB	10.29.00	1
Tb	351,44	K	SystemDB	04.13.00	1
Tc	516,25	K	SystemDB	04.13.00	1
Tm	159,05	K	SystemDB	04.13.00	1
Vc	,1669	m^3/kmol	SystemDB	04.13.00	1
Zc	,248		SystemDB	04.13.00	1


Compound Information & Point Properties
File Load Compound Update DB Help
System and User DB - Compound Information and Point Properties
Empricial Formula C2H6O
Common Name ETHANOL
Chemical Abstracts Name ETHANOL
IUPAC Name ETHANOL
Structural Formula CH3CH2OH
CAS Number 64175
System Database (Not Editable)
User Database (Editable)
Molecular Weight 46,0684
Melting Point Temperature 159,05 K
Normal Boiling Point 351,44 K
Critical Temperature 516,25 K
Critical Pressure 6,384E06 pascal
Critical Volume ,1669 m^3/kmol
Critical Compressibility, Zc ,248
Liquid Density (@Tb) 17,083 kmol/m^3
Heat of Vaporization (@298K) J/kmol
Heat of Vaporization (@Tb) 3,94E07 J/kmol
Heat of Formation (@298K) -2,3481E08 J/kmol
IG Std. Entropy (@298K) 282.590, J/(kmol K)
IG Entropy of Form (@298K) -223.143, J/(kmol K)
IG Free Energy of Form (@298K) -1,6828E08 J/kmol
Acentric Factor ,637
Polarity Factor
Reidel Factor


Units Selection
Return Help
Default Unit Sets
SI Metric English
Temperature Units
K
C
F
R
Pressure Units
pascal
bar
lbf/in^2 (psi)
N/m^2
atmosphere
Enthalpy Units
J/kmol
cal/gmol
BTU/lbmol
kcal/gmol
kcal/kmol
Entropy/Heat Cap.
J/(kmol K)
cal/(gmol C)
BTU/(lbmol F)
kcal/(kmol K)
Volume Units
m^3/kmol
mL/gmol
ft^3/lbmol
gal/lbmol
L/kmol
Density Units
kmol/m^3
gmol/mL
lbmol/ft^3
lbmol/gal
kmol/L
Surface Tension Units
N/m
dyne/cm
poundal/in
Viscosity Units
Pa s
poise
lbm/(s ft)
g/(sec cm)
lbm/(hr ft)
Thermal Conductivity
J/(s m K)
(cal cm)/(s cm^2 C)
(BTU ft)/(hr ft^2 F)
(W cm)/(cm^2 C)
(BTU in)/(hr ft^2 F)
Done


Reichenberg Gas Viscosity Group Contribu...
1 -CH3
1 >CH2 (nonring)
>CH- (nonring)
>C< (nonring)
=CH2
=CH- (nonring)
>C= (nonring)
-CH
-C- (nonring)
>CH2 (ring)
>CH- (ring)
>C< (ring)
=CH- (ring)
>C= (ring)
-F
-Cl
-Br
-OH (alcohols)
-O- (nonring)
>C=O (nonring)
-CHO (aldehydes)
-COOH (acids)
-COO-(ester) or HCOO-
-NH2
>NH (nonring)
=N- (ring)
1 -CN
>S (ring)
Done
Clear
Help


Temp. Corr. Property Prediction
File Point Properties Calculate Table or Graph Help
Temperature Correlated Properties
Compound Name: ETHANOL - C2H6O
Property Recalc Method Value Prop Units Mass Basis Temp. Tmin Tmax T Units Tab Gph Meth Desc
Vapor Pressure SystemDB 7.895,67 pascal 298,15 159,1 516,3 K Vp
Heat of Vaporization SystemDB J/kmol 298,15 300,0 516,3 K Hv
Liquid Density SystemDB 17,0899 kmol/m^3 298,15 159,1 516,3 K Ld
Gas D@1,2E00 Pa Ideal 4,84078E-07 kmol/m^3 298,15 K Gd
Surface Tension SystemDB 2,3386E-02 N/m 298,15 273,2 516,3 K St
Heat of Formation SystemDB -2,34881E08 J/kmol 298,15 298,0 1000,0 K Hf
Free Energy of Formation SystemDB -1,68512E08 J/kmol 298,15 298,0 1000,0 K Gf
Liquid Heat Capacity Bondi-Rowlinson J/(kmol K) 298,15 273,0 516,3 K LCp
Gas Heat Capacity Harrison-Seaton J/(kmol K) 298,15 300,0 1500,0 K GCp
Solid Heat Capacity User Enter J/(kmol K) 298,15 K SCp
Liquid Viscosity Gambill Pa s 298,15 413,0 K Lv
Gas Viscosity Reichenberg 6,10851E-06 Pa s 298,15 K Gv
Liquid Therm Cond Baroncini, et al. 1,58094E-01 J/(s m K) 298,15 516,3 K Lt
Gas Therm Cond Eucken J/(s m K) 298,15 273,0 K Gt


Point Property Prediction
File
Temp. Corr. Props
Calculate
Help
PREDICT Chemical Physical Properties
Compound Name: ETHANOL - C2H6O
Property
Recalc
Method
Value
Get from DB
Units
Method Descrip
Molecular Weight
SystemDB
46,0684
MW
Melting Point Temperature
SystemDB
159,05
K
Tm
Normal Boiling Point
SystemDB
351,44
K
Tb
Critical Temperature
SystemDB
516,25
K
Tc
Critical Pressure
SystemDB
6,384E06
pascal
Pc
Critical Volume
SystemDB
1,669E-01
m^3/kmol
Vc
Critical Compressibility Zc
SystemDB
2,48E-01
Zc
Liquid Density (Tb)
SystemDB
17,083
kmol/m^3
Dl-Tb
Heat of Vaporization (298K)
Pitzer
4,32649E07
J/kmol
Hv298
Heat of Vaporization (Tb)
SystemDB
3,94E07
J/kmol
Hv-Tb
IG Heat of Formation (298K)
SystemDB
-2,3481E08
J/kmol
Hf
IG Std. Entropy (298K)
SystemDB
2,82590E05
J/(kmol K)
S
IG Entropy of Form (298K)
SystemDB
-2,23143E05
J/(kmol K)
Sf
IG Free Energy Form (298K)
SystemDB
-1,6828E08
J/kmol
Gf
Acentric Factor
SystemDB
6,37E-01
Af
Polarity Factor
x
Riedel Factor
Riedel - Omega
8,9444
Rf