

Chemistry,Engineering Data,units,calculations

Simple to use Chemical Engineering App/Reference for students and professionals.

Chemical Engineering/General Data app provides information on over 4000 chemical compounds from various chemical groups. The information can be saved as a file(txt) and also shared i.e. via email etc.

The App is simply laid out for easy use/access to the information by dropdown list.

Also contains unit conversions 300+ definitions,Sci-calculator which allows the direct use of the chemical data information for calculations and a Sudoku game.

The main Chemical Groups are :- (Only certain group type information has been listed below.)

Thermodynamic Data(226)

Solids Data (101)

Physical Data (481)

Organic Data (1314) (Info types : Molecular Weight,Form and Colour,Compound Specific Gravity,Compound Melting Point($^{\circ}\text{C}$),Compound Boiling Point($^{\circ}\text{C}$),Compound Solubility 100 parts cold water,Compound Solubility 100 parts Ether

Acid and Base Dissociation Constants (42)

Acid and Base Dissociation Constants in Water (21)

Acid Base Indicators (12)

Liquids Data (22)

Anion_Contributions_Entropies (23)

Cation Contributions (57)

General Chemical Data (917)

Gas Data (24) Gas Name,Density(kg/m^3),Melting Point $^{\circ}\text{C}$,Boiling Point $^{\circ}\text{C}$,Thermal Conductivity (W/mK),Specific Heat Capacity (KJ/KgK),Specific Heat Cv (KJ/kgK)

Steam Tables Pressure

Periodic Table (118) (Info types : Element Name,Atomic Symbol,Atomic No.,Year Discovered,Atomic Mass,Melting Point, $^{\circ}\text{C}$,Boiling Point, $^{\circ}\text{C}$,State at Room Temp, Density g/ml,Electronegativity (Pauling),Electron Affinity (eV),Common Oxidation States,Ions Commonly Formed,Electron Configuration, Atomic Radius (\AA),Ionic Radius (\AA),Covalent Radius (\AA),Atomic Volume (cm^3 mol),Crystal Structure,Electrical Conductivity (mho cm),

Specific Heat (J/gK),Heat of Fusion (kJ/mol),Heat of Vaporization (kJ/mol),Thermal Conductivity ($\text{W}/(\text{mK})$),mg/kg in Earths crust,Standard Electrode Potentials Acidic

Standard Electrode Potentials Basic (28)

Standard Heats Free Energies Formation (198)

Standard Heats Free Energies Formation Absolute Entropies (206)

Thermodynamic Data1 (149)

Saturated Steam - Pressure

Saturated Steam - Temperature

SuperHeated Steam - Pressure - PSI

Steam Table

SuperHeated Steam Pressure - Bar

Steam Table SI - Bar

Instructions : Select from the Data Group listbox the group to find data from. Once selected the available items will be listed in the items listbox. Select the item required and the items information will

be displayed below in a scrollable list. Use the search box to search for items within that group. The search

is based on the items name. i.e. type a letter, click the search button and any items name within that group containing that letter will be displayed in the items box. Click the export button to export, share the displayed information.

View the help online for further information.

All data is maintained offline, no internet connection required.

All Data is AS is and no guaranteed or warranties for the correctness of the data is implied.

Application Permissions :
Read/write to SD Card.

Settings Instructions : \n

1. Select the number of decimal values after the decimal . to appear in the result.i.e 2 means 1.XX from listbox.\n
2. Check if it is required to express the result in engineering form(scientific form) i.e. $2e+4$ \n

Units Instructions : \n

1. Select Units group from listbox.\n
2. Select unit conversion from conversion listbox.\n
3. After selecting unit conversion result will calculated.Use number keypad, enter value to be converted.\n

Results calculated on clicking number or by clicking Calculate button on keypad. \n

Backkey and clear options remove enteries. \n

Use top Textbox for unit conversion and below textbox for Calculator.Calculator functions not used directly for conversions,use keypad copy buttons to copy conversion values to calculator textbox.

Use calculator functions cursor must be in below textbox.Standard calculator usage.Use equals button to calculate.Result is displayed below entry text.

Use $\times 10^x$ key raises number by a factor of 10 i.e. 10000 enter 1×10^5 \n

The displayed reverse result is the unit conversion value calculated in the reverse direction. Click the viewer button to display common symbols used in the units display.\n

UNIT SYMBOLS \n

π - Pi value (3.142..), mm - millimeter, km - kilometer \n

yd - yard, cm - centimeter \n

in - inch, ft - foot\n

m - metro, ha - hectare \n

kcal - kilocalorie \n

Btu - British thermal unit \n

Cal- calorie \n

MJ - mega joule (1,000,000 joules) \n

g - gram, mg - milligram \n

kg - kilogram, gal - gallon \n

KJ - kilojoule \n

kWh - kilo watt hour (1000 joules)

hp - horse power, lbf - pound force \n

W - watt, J - joule \n

h - hour, s - second \n

mN - milli newton \n
kgf - kilogram force \n
tonf - ton force, kN - kilo newton \n
N - newton, min - minute \n
psi - pounds per square inch \n
atm- atmosphere, dyn - dyne,l - liter \n
mmHg - millimeters of mercury \n
cu- cubic, mi - mile oz - ounce, US - United States\n
Imp -Imperial, Lux - Illuminance, Pb - Pebibyte\n