1. Moving around elements
   1. PHASE AND COMPONENT
      1. Activity type
         1. activity and activity coefficient (unitless)
      2. composition type
         1. composition (variable)
      3. *Diffusion coefficient type*
         1. *tracer diffusion coefficient,* ***self diffusion coefficient*** *,* ***binary diffusion coefficient***
      4. fugacity type
         1. not used
      5. fugacity coefficient
         1. fugacity coefficient
      6. Mean ionic activity coefficient type
         1. “
      7. Partial energy type
         1. molar enthalpy of solution, partial molar enthalpy, relative partial molar enthalpy, partial molar gibbs energy, relative parital molar gibbs energy
   2. SOLUTE AND SOLVENT
      1. *Apparent or excess energy type*
         1. *apparent molar enthalpy, apparent molar gibbs energy, excess molar enthalpy molar enthalpy of mixing, molar enthalpy of dilution*
      2. *Bunsen Coefficient (STP amount of gas dissolved in a pure solvent at a T with a pp of 1bar)*
         1. ***Bunsen coefficient***
      3. Composition ratio type (might want to change name of type)
         1. Amount ratio of solute to solvent
      4. Mass per volume solution type **(why does this not need a solute, solvent?)**
         1. Mass concentration
      5. Molality type
         1. molality, ratio of amount of solute to mass of solution
      6. *molar conductivity type* 
         1. ***molar conductivity***
      7. Osmotic Coefficient Type
         1. Osmotic coefficient
      8. Relative molar volume type
         1. apparent molar volume, relative partial molar volume  **???**
      9. Volume ratio of solute to Solvent
         1. Volume ratio of solute to solvent
   3. ONLY COMPONENT
      1. Mass fraction type **(why do these not need a component?)**
         1. azeotropic composition (mass frac), eutectic composition (mass frac), monotectic composition mass frac, lower consolute composition (mass frac), mass fraction, mass fraction in LLG critical state, mass ratio of solute to solvent, upper consolute composition (mass fraction)
      2. Mole fraction type **(why do these not need a component?)**
         1. azeotropic composition (mole frac), eutectic composition (mole frac), monotectic composition (mol frac), mole fraction, mole fraction in LLG critical state, lower consolute composition (mole frac), upper consolute composition (mole fraction)
      3. molarity type
         1. amount concentration, mean ionic activity, amount density,
      4. Ostwald coefficient
         1. “
      5. Partial pressure component
         1. Partial pressure, fugacity
      6. Second virial coefficenit type
         1. second virial coefficient, second acoustic virial coefficient, excess virial coefficient, interaciton virial coefficient
      7. Third virial coefficient type
         1. third virial coefficient, third acoustic virial coefficient, third interaction coefficient C112, third interaction coefficient C122,
      8. Partial molar volume type
         1. Partial molar volume
   4. ONLY PHASE:
      1. Phase volume fraction type
         1. Phase volume fraction
   5. No keys:
      1. Complex relative permittivity type
         1. complex relative permittivity imaginary part at various frequencies, complex relative permittivity real part At various frequencies
      2. Compressibility type
         1. adiabatic compressibility, excess adiabatic compressibility, isothermal compressibility, excess isothermal compressibility
      3. Compressibility factor type
         1. critical compressibility factor
      4. Cryoscopic constant mole fraction scale type (might want to look at name)
         1. cryoscopic constant mole fraction
      5. cryoscopic constant molality scale type
         1. cryoscopic constant molality scale
      6. electrical conductivity type
         1. electrical conductivity
      7. electrical resistivity type
         1. electrical resistivity at ref geom, electrical resistivity
      8. Energy type
         1. molar enthalpy of transition, molar enthalpy of vaporization/sublimation , molar enthalpy, molar gibbs energy, molar helmholtz energy, molar internal energy, molar enthalpy change, **excess molar gibbs energy,** molar gibbs energy of vaporization/sublimation,

molar lattice energy at 0K, quadruple/quintuple point temperature, Van't Hoff enthalpy of transition standard state molar enthalpy, standard state molar gibbs energy

* + 1. entropy type
       1. molar entropy of transition, molar entropy of vaporization/transition, molar entropy, apparent molar entropy, excess molar entropy, partial molar entropy, relative partial molar entropy, standard state molar entropy,
    2. fluidity type
       1. fluidity
    3. heat capacity type
       1. molar heat capacity

at constant pressure,

at saturation pressure,

at constant volume,

* + - 1. specific heat capacity

at constant pressure,

at saturation pressure,

at constant volume,

* + - 1. heat capacity

at constant pressure per volume,

at saturation pressure per volume,

at constant volume per volume,

* + - 1. molar enthalpy function, molar gibbs energy function, standard molar gibbs energy function, apparent molar heat capacity, excess molar heat capacity, partial molar heat capacity, relative partial molar heat capacity, standard state molar heat capacity, heat capacity change at transition
    1. heat capacity over emittance type,
    2. heat capacity ratio type
    3. henry’s law constant molality type
    4. Henry’s law constant molarity type
    5. incremental Enthalpy change
    6. Joule Thompson coefficient type
    7. kinematic viscosity type
    8. lattice angle type
    9. lattice dimension type
    10. linear expansion coefficient type
    11. magnetic permeability type
    12. mass density type
        1. used for critical density, specific density, mass density
    13. mass specific volume type
    14. molar density type
    15. molar refraction type
    16. molar volume type
        1. critical molar volume, molar volume, excess molar volume
    17. other refractive index type
    18. permittivity type
        1. excess relative permittivity at zero frequency,
    19. phase transition temperature type
    20. Pressure type
        1. critical pressure, lower consolute pressure, upper consolute pressure, cryoscopic constant molality type, phase boundary pressure, triple point pressure, azeotrope pressure, Vapor pressure, Henry's law constant mole fraction scale, osmotic pressure,
    21. pressure coefficient of molar enthalpy type
        1. pressure coefficient of molar enthalpy
    22. refractive index type
        1. refractive index NaD Line, excess refractive index NaD line
    23. Radiance temperature type
        1. Radiance temperature
    24. Relative linear expansion type
        1. Relative linear expansion
    25. Relative magnetic permeability type
    26. Relative permittivity type
        1. relative permittivity at various frequencies, relative permittivity at zero frequency
    27. relative volumetric expansion type
    28. speed of sound
    29. specific volume type
    30. spectral hemispherical emittance, spectral normal emittance
    31. surface tension type
        1. interfacial tension, surface tension liquid gas, excess surface tension
    32. Temperature type
        1. Critical temperature, lower consolute temperature, upper consolute temperature, cryoscopic constant mole fraction, LLE temperature, SLE temperature, eutectic temperature, monotectic temperature, normal melting temperature, peritectic temperature, triple point temperature, azeotrope temperature, boiling temperature, normal boiling temperature, temperature of half conversion, peak temperature, zero gibbs energy temperature
    33. Thermal conductivity type
    34. Thermal diffusivity type
    35. Thermal expansion coefficient type
        1. isobaric coefficient of expansion, excess coefficient of expansion
    36. thermal pressure coefficient type
    37. total hemispherical emittance
    38. total normal emittance
    39. Transport number type
    40. Viscosity type
        1. Viscosity, excess viscosity
    41. Volume fraction type **(why do these not need a component or solute solvent?)**
        1. eutectic composition (vol frac), lower consolute composition (vol frac), upper consolute composition (vol frac), volume fraction,
    42. wavelength type