





$$vapPercent := \frac{1}{-1 \cdot \left(\frac{.32 - .6}{.9 - .6}\right) + 1} = 0.517$$

$$vapPercent := \frac{1}{-1 \cdot \left(\frac{.1 - .6}{.75 - .6}\right) + 1} = 0.231$$

$$1 - .32 = 0.68$$

$$1 - .75 = 0.25$$

| $bd \coloneqq \frac{1}{-1 \cdot a + 1} = .75$ | $solve, a \longrightarrow -0.33333$ | 33333333333 | 33333 | | |
|---|-------------------------------------|-------------|-------------|-------------|--|
| $-1 \cdot a + 1$ | 0.0000 | | 0000 | | |
| | | | | | |
| $\frac{.4856}{.9456} = -0.333$ | | | | | |
| .9456 | | | | | |
| | | | | | |
| mole fraction of water | | | | | |
| vapor and liquid resp | pectively | | | | |
| 1485 = 0.515 | 1945 = 0.055 | | | | |
| 1465=0.515 | 1945 = 0.055 | | | | |
| Olume Flow | cum/hr | 1.53418 | 2/64.83 | 2/66.36 | |
| /apor Phase | cumym | 1.55416 | 2704.03 | 2700.30 | |
| Molar Enthalpy | kcal/mol | | -73.0587 | -73.0587 | |
| Mass Enthalpy | kcal/kg | | -1853.46 | -1853.46 | |
| Molar Entropy | cal/mol-K | | -31.9559 | -31.9559 | |
| Mass Entropy | cal/gm-K | | -0.810706 | -0.810706 | |
| Molar Density | mol/cc | | 2.71265e-05 | 2.71265e-05 | |
| Mass Density | kg/cum | | 1.06925 | 1.06925 | |
| Enthalpy Flow | Gcal/hr | | -5.4794 | -5.4794 | |
| Average MW | | | 39.4174 | 39.4174 | |
| + Mole Flows | kmol/hr | | 75 | 75 | |
| Mole Fractions | | | | \neg | |
| WATER | | | 0.514175 | 0.514175 | |
| ETHYL-01 | | | 0.485825 | 0.485825 | |
| + Mass Flows | kg/hr | | 2956.31 | 2956.31 | |
| volume Flow | cum/nr | <u> </u> | 2/04.83 | 2/04.83 | |
| Liquid Phase | Cumym | | 2704.03 | 2704.03 | |
| Molar Enthalpy | kcal/mol | -101.5 | | -101.5 | |
| Mass Enthalpy | kcal/kg | -1704.84 | | -1704.84 | |
| Molar Entropy | cal/mol-K | -85.1133 | | -85.1133 | |
| Mass Entropy | cal/gm-K | -1.4296 | | -1.4296 | |
| Molar Density | mol/cc | 0.0162953 | | 0.0162953 | |
| Mass Density | kg/cum | 970.166 | | 970.166 | |
| Enthalpy Flow | Gcal/hr | -2.53751 | | -2.53751 | |
| Average MW | | 59.5365 | | 59.5365 | |
| + Mole Flows | kmol/hr | 25 | | 25 | |
| - Mole Fractions | | | 1 | | |
| | | 0.0574746 | | 0.0574746 | |
| WATER | | 0.0574746 | | 0.0374740 | |

