

GAS FOR SPECIAL APPLICATION

LIQUID AND VAPOR HYDROCARBON MIXTURES

Sun Air provides full ranges of gaseous and liquid multicomponent hydrocarbon blends. Whenever the mixture is a gas phase or liquid phase mixture, preparation criteria will ensure that the mixture exists as a single phase. We can advise on the optimal combination of preparation method and cylinder type. Mixture can be prepared to meet Primary or Certified grade tolerances. In either case, each component is analyzed and certified to be within the stated analytical accuracy.

LIQUID BLEND (Typical example for LPG process application)

Composition (Example):

1% n-butane, 3% iso-butane, % 1-butene, 2% cis-2-butene,
2% trans-2-butene, 8% n-Pentane, 5% 1-Pentene Balance iso-butane

Composition (Example):

3% n-butane, 2% cis-2-butene, 1% trans-2-butene, 3% 2-methyl pentane,
3% 3-methyl pentane balance 1.3-butadiene

VAPOR MIXTURES (Typical example for LPG process application)

Composition (Example):

3 ppm acetylene, 3 ppm carbon monoxide, 3 ppm carbon dioxide, 500 ppm ethane,
110 ppm methane balance ethylene.

Composition (Example):

10% n-butane, 1% n-butene, 1% iso-butane, 1% 1-butene, 100 ppm methyl acetylene, 100 ppm propadiene
10% propylene balance propane.

Low pressure cylinder such as LP26 and LP48 are suitable for applications demanding smaller quantities for liquid hydrocarbon application. Although liquid mixtures can be supplied in a cylinder equipped with a diptube and pressurised with a helium pad, this is not a true single phase mixture. Some of these components will be partially vaporized, and if the pad pressure drops (e.g. when a sample is withdrawn), the more volatile components will further vaporize. This will change the composition of the liquid. To ensure constant composition of the liquid, the mixture should be prepared in a piston cylinder.



Piston Cylinder