GLOSSARY

Ambient Temperature - The normal temperature of the environment.

Auto-ignition Temperature - See ignition temperature.

Boiling Point - The temperature at which a liquid boils at normal atmospheric pressure. The temperature at which the vapor pressure equals the atmospheric pressure.

Chemical Property - Relates to a substance's ability to chemically change when subjected to an outside energy source (e.g. flame or pressure) and/or when contacted with other substances (e.g. water).

Chemical Reactivity - The process whereby substances are changed into other substances by the rearrangement, or recombination of atoms.

Closed Cup Tester - A device for determining flash points of flammable and combustible liquids, utilizing an enclosed cup, or container, for the liquid. Recognized types are the Tagliabue (Tag) Closed Tester, the Pensky-Martens Closed Tester and the Seta Flash Closed Cup Tester.

Combustible Liquid - Term commonly used for liquids that emit burnable vapors or mists. Technically, a liquid whose vapors will ignite at a temperature of 100oF or above.

Condensation (Chemical) - A reaction in which two or more molecules of a chemical combine. Water or some other simple substance may be formed in the reaction. Heat is liberated in large amounts in the reaction.

Decomposition (Chemical) - A reaction in which the molecules of a chemical break down to its basic elements, such as carbon, hydrogen or nitrogen, or to more simple compounds. This often occurs spontaneously, liberating considerable heat and often large volumes of gas.

Equilibrium - A state in which the rate of molecules leaving a liquid is equal to the rate of molecules returning into the liquid. The condition is said to be a state of dynamic physical equilibrium.

Evaporation - The process in which liquid becomes vapor, as more molecules leave the vapor than return.

Exothermic Reaction - A chemical reaction that liberates heat during the reaction.

Explosion Proof Equipment - Equipment, usually electrical equipment, designed for use in hazardous locations, such as where explosive vapors or dusts may be present. The equipment is made to withstand internal explosions of gas or vapor-air mixtures without allowing the flame to propagate to the surrounding atmosphere.

Explosive Limits - See flammable limits.

Fire Point - The lowest temperature of a liquid in an open container at which vapors are produced fast enough to support continuous combustion.

Flammable Limits - The range of the percentages of vapor mixed with air that are capable of being ignited, as opposed to those mixtures that have too much or too little vapor to be ignited. Also called explosive limits.

Flammable Liquid - Term commonly used for liquids that emit burnable vapors. Technically, a liquid whose vapors will ignite at a temperature below 100oF (closed-cup flash point).

Flash Point - The lowest temperature at which the vapor pressure of a liquid is just sufficient to produce a flammable mixture with air that can be ignited by a source of ignition, such as a flame or spark. Combustion cannot be sustained at this temperature.

Frothing - A foaming action caused when water turns to steam when in contact with a liquid at a temperature higher than the boiling point of water (212oF), and entrains part of the viscous liquid as it bubbles.

Ignition Temperature - The minimum temperature to which a liquid must be heated where it will ignite spontaneously. Also called auto-ignition temperature or spontaneous ignition temperature.

Molecule - The smallest possible particle of a chemical compound that can exist in the free state and still retain the characteristics of the substance. Molecules are made up of atoms of various elements which form the compound.

Open Cup Tester - A device for determining flash points of flammable and combustible liquids, utilizing an open cup, or container, for the liquid. Recognized types are the Tagliabue (Tag) Open Cup Apparatus and the Cleveland Open cup Apparatus.

Physical Property - A characteristic of a substance that can be detected by the human senses, either with or without mechanical aids. These include such characteristics as color, odor, taste, boiling point, flash point, etc., as opposed to chemical properties which have to do with the molecular change of the substance.

Polymerization - A chemical reaction in which like molecules of a chemical simply join together to form a large variety of heavier molecules, or polymers as they are sometimes called. Considerable heat is liberated during the reaction.

Pressure Vessel - A tank or other container constructed so as to withstand interior pressure greater than that of the atmosphere.

Pyrolysis - A process in which a solid or certain liquids chemically decompose, giving off various vapors as temperature rises.

Solubility - A measure of the amount of a substance that will dissolve in another substance at a specified temperature. Water solubility means that a substance will dissolve in water.

Specific Gravity - The ratio of the weight of a substance to the weight of the same volume of water. The specific gravity of water equals one.

Spontaneous Ignition Temperature - See ignition temperature.