FIELD REP. GLOSSARY OF TECHNICAL TERMS

REVISED 11/15/01

1. **pH – is the measurement of the hydrogen ion content in water based solutions. A solution with a pH of 0 to less than 7 is acid, pH of exactly 7 is neutral, and pH over 7 to 14 is alkaline.**

2. **Caustic - materials burn skin and corrode metal as a result of the presence of free, unreacted sodium hydroxide. Many products have high pH's but are not caustic. For example Industrial Strength contains free sodium hydroxide and is therefore caustic whereas Super Strength does not (they both have pH's over 12.5)**

3. **Acidic – Wearing away a surface gradually by chemicals. (Example – Aluminum cleaner wears away the surface of aluminum). Acidic materials are corrosive like caustic materials but are at the other extreme of the pH scale.**

4. **Surfactant – surface-active agent. Surfactants are water soluble (they dissolve in water) compounds that decrease the surface tension of water. By reducing surface tension materials can be added to water to increases it's ability to clean. Surfactants are the most important and expensive ingredients in cleaner formulations.**

5. **Water-softening agent – removal of scale forming calcium and magnesium ions from hard water, or replacing calcium and magnesium ions with the more soluble sodium ions. Calcium and magnesium ions react with many surfactants to form insoluble soap scums (bath tub ring). EDTA softens hard water and are often referred to as "chelators".**

6. **Butyl – In the cleaning industry Butyl refers to the chemical compound Butyl Cellosolve (2-butoxyethanol). Butyl is a water-soluble solvent (most solvents don't mix with water) that greatly enhances the grease-cutting ability of water based (aqueous) cleaners. Given recent toxicity concerns many businesses prefer not to use cleaners that have butyl in them.**

7. **Alkaline Builders – chemical additives that increase the pH of a solution to make it more alkaline. See definition number 1 on pH in general. Alkaline builders raise the pH of the cleaning solution so that the surfactants can do a better job (most surfactants work best in alkaline/high pH environments).**

8. **Flash Point – the lowest temperature at which a flammable liquid gives off enough vapors to ignite but before it will burn continuously. Waste materials that have a flashpoint below 140 degrees must be managed as a hazardous waste.**

9. **Flammable – Liquids with a flashpoint below 100° F.**

10. **Combustible – Liquids with a flashpoint between 100 – 200° F.**

11. **Corrosion Inhibitor – Substance which, when added in small amounts to a corrosive medium, reduces the rate of corrosion, prevents weakening of metal surfaces.**

12. **Emulsion – A homogenous mixture of two components that usually don't mix together (they aren't soluble). Emulsions are formed by the input of either chemical energy (the use of surfactants) or mechanical energy (high speed mixing). In the cleaning industry surfactants are used to create emulsions and are generally milky white in appearance.**

13. **Emulsion Breaking – Counteracting the interfacial film on dispersed oil droplets by neutralizing the negative charges on portions of the oil droplet surface. Breaking an emulsion will cause the two non-soluble components to separate and is usually accomplished by the addition of a strong acid.**

14. **Non-Emulsion – The inability of 2 liquids to blend together. Example – oil and water are non-emulsifying without an emulsifier (surfactant) to combine them together.**

15. **Hazardous Waste – Materials that, when spent, cannot be dumped down the drain or thrown in regular trash (they have to be handled by licensed hauler and transported to licensed facilities etc.). If a waste cleaning product has a flashpoint less than 140°F or a pH <2 or >12.5 then it must be handled as hazardous. Keep in mind that a material must be a waste before the hazardous waste regulations apply so the best thing a customer can do with cleaning products is to use them up for their intended purpose so that there is no waste. Managing hazardous waste is no fun so facilities try to avoid generating them when possible.**

16. **VOC - (Volatile Organic Compound) – materials that when they evaporate react in sunlight to form smog (ozone). In our industry the big culprits have been petroleum-based solvents like mineral spirits. In cities with smog problems petroleum based solvents are being phased out or banned.**