



Common Terms and Their Meaning

-A-

Acid-a chemical substance whose properties include the ability to react with bases or alkalis in water solutions to form salts. Always has a pH less than 7. Turns litmus paper red. A pH of 1 would indicate a strong acid. Tends to attack metals or glass.

Acid Inhibitors-chemicals that greatly reduce the attack of acids on metal surfaces. Inhibitors can prevent up to 99% of the damage caused by acids.

Acidity-the choking effect resulting from an alkaline –based product. There is no smell coupled with acidity.

Additive-any substance incorporated into a base material, usually in low concentrations, to perform a specific function. (Stabilizers, colorants, inhibitors, preservatives, thickeners, etc.).

Alcohol-a broad class of hydroxyl-containing organic compounds occurring naturally in plants and made synthetically from petroleum derivatives such as ethylene. Alcohols perform several functions in cleaners: control viscosity, solubilize ingredients and provide low temperature stability.

Alkali-a chemical substance (such as hydroxide or carbonate or sodium or potassium) which reacts with and neutralizes an acid. Has a pH above 7. In concentrated forms, may attack paint and some metals.

Anhydrous-refers to a chemical that contains no water. For example, any powder product would be anhydrous.

Anodized Aluminum-A special coating that is chemically bonded to an aluminum surface. The objective is to prevent oxidation of normal aluminum. Anodized aluminum usually looks as if it has a satin or colored finish.

-B-

Bi-Metallic Galvanic Corrosion-(dissimilar metals) this corrosion results in a black streak, occurring when an acid hits aluminum and another type of metal, producing an electrolyte much in the same matter as a car battery. This electrolyte causes corrosion and the streak is a result.

Biodegradability-the capability of organic matter to be decomposed by biological processes. Specifically, the rate at which detergents, pesticides, and other compounds may be chemically broken down by bacteria and/or natural environmental factors.



Blushing-dulling. A negative effect which caustics and acids can have on the finish of a vehicle's painted surface, chrome finish, etc.

Boiling Point-the temperature at which a liquid boils.

Booster-an aid in granular or liquid form that is formulated to reinforce specific performance characteristics desirable in cleaning.

Buffer-a compound or mixture that, when contained in a solution, causes the solution to resist change in pH.

Builder-a material that enhances or maintains the cleaning efficiency of the surfactant in a detergent formulation. The part of a formulation that imparts alkalinity, buffering, corrosion resistance, etc. generally the non-surfactant portion of a cleaner. Builders will tie up the hard water ions.

-C-

CAS Number-Chemical Abstract Service Number. A numerical name assigned to chemical compounds by the American Chemical Society.

Calcium Carbonate-an insoluble compound that results from the reaction of sodium or potassium carbonate with calcium water hardness ions.

Caustic-a strong base pH between 8 and 14. The term when used alone, usually refers to caustic soda (sodium hydroxide).

Chelate-when a substance has the ability to chemically bind calcium and or magnesium ions to form a water-soluble third substance.

Cleanser-a powder cleaning product usually containing an abrasive, a surfactant and sometimes bleach. (Comet)

Clear Coat-a clear protective finish applied to new cars at time of production. Applied to paint and most wheels.

Cloud Point-The temperature above which a detergent concentrate or solution separates into two distinct phases.

Combustible Liquid-a liquid with a flash point above 140f but less than 200f.

Corrosive-the characteristic of a material that eats away either metals or living tissue.



-D-

Degreaser-a specialty product that removes grease and oily soils. They are designed more for hard surfaces than for fabrics. They may be used for pretreatment or as the sole cleaning agent, but rinsing should always follow.

Demulsify-the breaking down of an emulsion of the insoluble material. It will cause a separate layer to form.

Detergency-Cleaning ability.

Detergent-any cleaning agent. In popular usage, washing and cleaning agents with a composition other than soap that can clean. Based on surface active agents derived and synthesized from petroleum, fatty acids and other sources. Detergent ingredients vary with the type of products, which include light duty and heavy duty formulations. The finished products come in a variety of forms, such as powder, liquids and crystals.

Dilution Ratio-The amount of water mixed with the product. (10:1 is 10 parts water to one part chemical).

Direct Meter-chemical being used directly without water (straight chemical)

Dwell Time-the time involved after the application of a chemical to the surface before rinsing.

-E-

Emulsifier-a compound which will link grease and water together in order to flush away.

Etching-the process whereby a strong acid or alkali will react with the surface and either remove a microscopic layer or dissolve the surface.

-F-

Fillers-detergent ingredients that are used to add weight and lower the cost of a detergent.

Flash Point-the lowest temperature at which a liquid produces sufficient vapor to ignite with a test flame.

Freeze Point-the temperature where a liquid turns to a solid.

-G-

Germicide-any agent that will kill bacteria, especially those causing disease.

-H-

Hard Surface Cleaner-a product formulated for cleaning painted surfaces, washable floor coverings, plastics, metals, porcelain and any other hard surfaces.



Hydrolysis-a chemical reaction in which water reacts with another substance to form one or more new substances.

Hydrophilic-water loving.

Hydrotrope-a substance that increases the solubility in water of another material which is only partially soluble. Used to make the formula stable and clear.

-I-

Inert-a surface or ingredient that will not react with anything. Non-reactive.

Inorganic-a substance that is not made of the combination of hydrogen and carbon.

-M-

Material Safety Data Sheet (MSDS)-government required form that must be on file for each chemical manufactured. The info contained on an MSDS describes hazards, precautions, ingredients, etc.

Muriatic Acid (Hydrochloric)-a very strong acid mainly used to remove concrete and mortar as well as other hard minerals and scale.

-N-

Neutral Cleaner-cleaner with a pH of 6 to 8.

Nobel Metal Scale-The more “Noble” a metal, the less reactive to chemical products. Stainless Steel is a noble metal, therefore, very unreactive. Aluminum is very low on the noble scale and therefore, very reactive.

-O-

Organic-a substance composed of hydrogen and carbon.

-P-

Phosphatized-chemically treated to provide iron and steel with a gray protective ferric-phosphate coating.

Phosphoric Acid-a relatively safe acid (used in soda drinks) commonly used for metal cleaning and rust removal.

Physical State-the state of something-has to be either a solid, liquid, or gas.

Precipitate-a material that has settled out of solution.



Pre-Mix-mixing concentrated chemical with water prior to the product being used in the wash process.

Processing Aids-agents used in the manufacture of detergents to prevent caking, to promote flow properties and to standardize product density.

-R-

Reactivity-the characteristic of a material to produce a chemical reaction.

Rinse Agent-an agent that aids in the drying of a surface by altering the size and shape of the water droplet. This product will **not** produce a spot-free surface. Mineral free water is required for this effect.

-S-

Sanitizer-an agent that reduces the number of bacterial contaminants to safe levels as determined by the public health requirements.

Saponification-the chemical conversion of soluble fats and oils into soluble soaps. The soluble soap is then dissolved and readily removed

Sequestering Agent-any compound that, in an aqueous solution, combines with a metallic ion to form a water-soluble combination in which the ion is substantially inactive.

Soap-a cleaning compound made by treating a fatty acid with a caustic chemical.

Soda Ash-common name for anhydrous sodium carbonate. This is a common builder in detergents.

Soluble-capable of being dissolved in a liquid.

Solution-a homogenous mixture formed by dissolving one or more substances into a liquid.

Solvent-a solution used to dissolve, or solubilize, other materials.

Specific Gravity-the ratio of the density of a material to the density of water.

Super-Concentrate-stronger mixture than a concentrate. The most concentrated a product can be before separation occurs.

Surfactant-(surface active agent)-agent that increases the emulsifying, dispersing and wetting properties of a solution.



Surface Tension-the attractive pull that is exerted on the surface of most liquids. These forces lessen the ability of a liquid to flow and its tendency to evaporate. By lowering the surface tension, a liquid flows better and can penetrate the soil for better removal.

Synergism-when two chemicals are combined and the combined effect of the chemical reaction is greater than either one acting independently.

Synthetic Detergent-a term describing washing and cleaning products based on synthetic surfactants rather than traditional soaps.

-T-

Thickening Agents-used to increase the viscosity of liquid detergents.

Titration-a way to find the strength of a chemical solution by using a titrant as an indicator of a solutions ratio of water to chemical.

TLV-Threshold Limit Value. Concentration of a material that is safe for working with continuous exposure for an eight-hour period.

Touchless-the removal of soil with chemical and high pressure only, no friction or mechanical agitation used.

TSP(trisodium phosphate)-a common phosphate used in chemical formulations. Will increase the product's ability to bind up the hard water ions.

-U-

UN Regulated Material-those chemicals or blends that by their chemical nature are deemed regulated by the U.S. DOT and the shipment of which is closely controlled and permitted only by trained and certified individuals

USDA Approval-a cleaning formulation that has been approved for use in federally inspected food processing facilities. The USDA no longer approves chemicals

Use-Dilution-the final concentration at which a product is used.

-V-

Viscosity-“thickness” of a liquid expressed in centipoise (cps) Water=1cps, Honey=10,000cps, Cooking Oil=500cps, and Molasses=100,000cps.



-W-

Water Hardness-soluble metal salts, principally those of calcium, magnesium, iron and manganese that when present in water in sufficient amounts create cleaning problems. In general, water hardness reduces the ability of surfactants to perform their cleaning function. Hardness is expressed in grains per gallon (gpg). Water that is above 5gpg is considered hard. Springfield, Mo. Water is 10.5gpg at the tap.

Wetting Agent-a compound that increases the ability and speed with which a liquid displaces air from a solid surface, thus improving the process of wetting the surface. Surfactants are wetting agents.