

GLOSSARY OF TERMS USE IN THE PAINT INDUSTRY

A

Abatement – Involves either removal of the painted surface, covering the painted surface with an impermeable surface, or covering surface with heavy-duty coating (encapsulant).

Abrasion Resistance – That property of a surface, which resists being worn away by rubbing or friction process. Abrasion resistance is not necessarily related to hardness as believed by some, but is more clearly comparable with toughness

Acoustic Paint – A specially prepared coating with nonbridging characteristics, used on walls and surfaces of acoustical material. The most efficient acoustical paints do not materially reduce the effectiveness of the unpainted acoustical material.

Acrylic – A synthetic resin used in high-performance water-based coatings. A coating in which the binder contains acrylic resins.

Adhesion – The ability of dry paint to attach to and remain fixed on the surface without blistering, flaking, cracking or being removed by tape.

Mechanical Adhesion – An interlocking of two materials because of shape, texture, etc. causing the two materials to remain affixed one to the other. Also known as tooth.

Chemical adhesion – A chemical reaction of two materials that bonds the two together.

Advancing Colors – Colors that give an illusion of coming forward, such as warm hues in which red-orange predominates. They give a stimulating sensation to the eye.

Aerosol – A product that uses compressed gas to spray the coating from its container.

Agglomeration – The condition in which particles (of pigments) collect in groups forming larger particles.

Air Dry – To dry an applied coating at ordinary room temperature, i.e., 60 degrees to 80 degrees F. and 40% to 60% relative humidity.

Aliphatic – The name usually applied to petroleum products derived from a paraffin base crude oil, and sometimes called “straight chain hydrocarbons.”

Among the typical aliphatic hydrocarbons are gasoline, mineral spirits, naphtha, and kerosene.

Alkyd – A resinous condensation product usually of phthalic anhydride and glycerol. Usually plasticized with fatty acids from various vegetable oils. This is the most used resin for varnishes and gloss, semi-gloss, and flat oil paints. Alkyd resins are available in many types and grades.

Alligatoring – A form of paint failure in which cracks form on the surface layer only. It is caused by the application of a hard drying paint over a relatively soft paint or by the application of thick films, in which case the underlying surface remains relatively soft. It is also caused by the application of paint over unseasoned wood. As the name implies, an alligatored surface is one that resembles the hide of an alligator in that it is cracked into large segments. As the surface of the thick film dries it tends to shrink. The soft undried, bottom layers of the thick film allow the surface film to shrink thereby causing the alligatoring.

Anti-Corrosive Paint – The first coat of paint applied directly to steels, iron or other metal surfaces to prevent or inhibit corrosion.

Asphaltum – Same as Asphalt – Any of the natural bitumens and asphalts (brown or black) or the artificial pitches, except those produced by destructive distillation. Asphalt is also obtained from the residue of petroleum, coal tar, lignite, and tar.

B

Bactericide – Any substance, which is used to kill or permanently destroy bacteria.

Batch – The unit or quantity of production in one complete operation in making a paint product. The volume which constitutes a batch in converting the raw materials into the finished product is called “Batch Size” that is, 50 gallon batch, 300-gallon batch, etc.

Binder – Solid ingredients in a coating that hold the pigment particles in suspension and attach them to the substrate. Consists of resins (e.g., oils, alkyd, latex). The nature and amount of binder determine many of the paint's performance properties--washability, toughness, adhesion, color retention, etc.

Bleaching Agent – Any material, which when properly used, makes the color of an object, usually wood, permanently lighter in color.

Bleeding – When the color of a dye, stain or pigment in an undercoat passes through the topcoat and produces an undesirable appearance, it is said to be “bleeding.” Bleeding can often be presented or eliminated by the application of an intermediate coat of shellac or aluminum paint or a “Stain Killer.”

Blistering – Formation of dome-shaped projections in paints or varnish films resulting from local loss of adhesion and lifting of the film from the underlying surface.

Blushing – Blushing is a term usually applied to lacquers when they become partially opaque, cloudy, or translucent upon application or drying. The main cause of this difficulty is a result of condensed moisture during the drying period.

Body – A loosely used word, which is becoming obsolete. The more suitable word is “Consistency” or “Viscosity.” It refers to how “thick” or “thin” paint is in its liquid state.

Boiled Oil – A vegetable oil, usually linseed oil, which is heat-treated until it is partly oxidized and thereby dries more rapidly than the raw or untreated oil. Also known as “kettle bodied oil.” Today, chemical agents are added instead to speed up the drying process.

Boxing – A method of mixing paint in which the liquid is repeatedly poured from one container to another. It is a standard method to insure uniformity prior to application or analysis.

Bridging – The ability of a paint or enamel to cover a crack, void or other small gap. Bridging characteristics are desirable or undesirable according to the type of paint we are formulating. For instance, screen enamels should be devoid of bridging tendency so that they will not clog the mesh of the screen. Acoustical paints are another example of those, which should be non-bridging in characteristics. It is desirable for roof paints to bridge to seal cracks.

Brittleness – The tendency to crack or flake when bent or stretched.

Brushability – The ability or ease with which a material can be brushed under practical conditions. This determination has been expressed in arbitrary units such as “poor,” “fair,” “excellent,” etc.

Bubbling – Formation of bubbles in a drying film or coating. They are caused by vigorous stirring just prior

to application or excess brushing. Subsequently, they either break to form pinholes or remain to damage appearance.

C

Catalyst – Substance whose presence increases the rate of a chemical reaction, e.g., acid catalyst added to an epoxy resin system to accelerate drying time.

Caulking Compound – Also spelled calking. A semi-drying or slow-drying plastic material used to seal joints or fill in crevices as over windows or around chimneys. Caulking compounds used to be made in two consistencies or grades; one for application by use of a caulking gun and the other for use with a putty knife is becoming obsolete. Most used type of caulking is made with linseed oil. More durable caulking compounds made with butyl rubber, Thiokol silicone and acrylic latex are not available.

Chalking – Formation of a powder on the surface of a paint film caused by disintegration of the binder during weathering. Can be affected by the choice of pigment or binder.

Checking – Slight breaks in the surface of the paint film. The breaks are called checks if the underlying paint films are visible.

Chemical Pigments – Pigments deliberately produced by man in the Chemical Industry, as distinguished from “Natural Pigments.”

Chipping – Characterized by the separation of the paint from the underlying substrate in flakes or chips.

Cloudy – A condition of a dried varnish or enamel or wet varnish appearing as a haze.

Coagulation – An undesirable changing of resin particles in latex paints into a rubber like mass. This can usually be caused either by freezing or sometimes, by heat, chemical, or catalytic agents.

Coarse Particles – Grains or particles of pigment, which are larger than, are required for securing optimum conditions of coated paint film. Coarse particles are often determined by noting the residue retained when the pigment is washed through a 325-mesh screen,

Coating – A general term for paints, varnishes, and lacquers. However, the term coating is now more closely associated with paints for severe exposures.

Cohesion – The attractive force between the same kinds of molecules. It is the force that holds the molecules of a substance together, and is contrasted with adhesion.

Colorant – Concentrated color (dyes or pigments) that can be added to paints to make specific colors.

Color Retention – The ability of paint to keep its original color. Major threats to color retention are exposure to ultraviolet radiation and abrasion by weather or repeated cleaning.

Compatibility – The ability of two or more materials to mix with each other without separation or reaction. Also, types of paints that may be applied over each other successfully are termed “compatible.”

Contrast Ratio – A term used in hiding power determinations, meaning the brightness of a coating over a black surface area divided by the brightness of the coating over a white area.

Cool Colors – Any of the hues in which blue predominates. The term “cool” is applied to these colors because of their association with water, ice, etc. Opposed to “warm colors.” Cool hues are also said to be receding colors.

Copolymerization – A term applied when two or more substances polymerize at the same time to yield a product, which is not a mixture of separate polymers but a complex having properties different from either polymer.

Copper Stains – The yellowish or brownish discoloration or stain caused when copper corrodes, and the compounds are permitted to flow over or deposit on a painted surface. Copper stains can best be prevented by the application of paint or varnish on all copper screen or other copper surfaces.

Corrosion – To attack exposed metal surfaces by atmospheric and other influences, usually an oxidation process such as rust on steel.

Covering Power – The expression, in square feet per gallon, of the ability of a coating to cover a surface.

Cracking – It is related to the physical condition of paint film. It is manifest in coatings by a break extending through the paint to the surface. The break should be called a “crack” if the underlying surface is visible. The evaluation terms of cracking degrees are “slight” “definite,” and “bad.”

Crawling – The tendency of a liquid to draw up into drops or globules as a result of an abnormally high degree of surface tension and/or – as a result of – a vary hard, slick, or greasy surface where the normal surface tension of the liquid draws the liquid up and exposes the surface.

Crazing – The fine lines or very small surface cracks on paint film.

Creosote – A liquid coating made from coal tar once used as a wood preservative. It has been banned for consumer use because of potential health risks.

Crocking – Removal of color by abrasion or rubbing, term applied to flat finish paints when color comes off on a sponge or rag during washing.

Cure, Curing – The process whereby a liquid coating becomes a hard film.

D

Depth of Finish – A desirable visual impression, which is usually gained by viewing a thick film of varnish or enamel of excellent smoothness or evenness.

Dispersed – Finely divided or colloidal in nature, such as pigment particles completely separated in a binder as compared with several pigments particles stuck to one another.

Driers – Various compounds added to coatings to speed the drying.

Dry – The process by which a liquid coating is converted into a solid, nontacky surface. Drying may take place by evaporation of a solvent, as in lacquers, by oxidation or polymerization of a unsaturated compound, as in oils or varnishes, by catalytic reaction, as with epoxy resins, or by addition of water, as with Portland cement paints and certain urethane coatings.

Dry Color. – Same as pigment.

Dry Film Thickness – The thickness of a paint film left after the evaporation of solvent and other drying reactions. Dry film thickness is usually reported in mils (thousandths of an inch).

Drying Oils – An oil that when exposed to air will dry to a solid through chemical reaction with air: linseed oil, tung oil, perilla, fish oil, soybean oil.

Drying Time – The time required for an applied film of a coating to reach the desired hardness. There are different stages in the drying of a film, which are expressed by various terminology such as “dry to touch,” “dry tack free,” “Dust free,” and “dry hard.” These terms are arbitrary, and times vary depending on type of product, temperature, and humidity.

Durability – The ability of a material to withstand the destructive agents with which it comes in contact. The term “durability” is often incorrectly used to signify only weather resistance. For instance, a material may be durable under the conditions for which it has been designed, even though the film would rapidly disintegrate upon exposure to normal weather conditions such as rain and sunlight.

E

Earth Pigments – The class of pigments, which are mined directly from the earth, and are also frequently termed natural or mineral pigments or colors. Some examples of earth pigments are iron oxide, yellow ochre, raw sienna, raw umber, etc. These pigments have the advantage that they are quite stable, being unaffected by alkalis, heat, light, moisture, and most of the vehicles; but they have the disadvantage in that they do not have the exact color consistency from one batch to another as do chemically produced pigments.

Effloresce – Being covered with a whitish crust or fine white crystals. Both exterior and interior brick and masonry walls have a tendency to effloresce, and this is a common contributory cause of paint failures, especially where paint has been applied over or near mortar joints. Do not confuse this term with effervesce which means the frothing or bubbling of a liquid due to the escape of gas (due not to boiling).

Eggshell Finish – A finish with a gloss higher than flat and considerably less than semi-gloss.

Elasticity – That property of a film, which permits it to stretch or change in size and shape, returning to normal conditions, without breaking or rupture during the distortion. The term elasticity should not be confused with toughness, tensile strength, distensibility of elongation, which have different meanings.

Electrostatic Spray – an application process in which an electric charge is applied to the coating as it leaves the gun, and the opposite charge is applied to the object to be coated. Spray particles are attracted to the object, reducing over spray and providing uniform coverage.

Emulsion – A mixture of solids suspended in a liquid.

Emulsion Paint – Coating in which resins are suspended in water, then flow together with the aid of an emulsifier. Example: latex paint.

Enamel – Broad classification of paints that dry to a hard, finish, usually with some degree of gloss.

Erosion – The wearing away of a paint film or any other material due to the atmospheric influence.

Exposure Tests – An exposure test is a preliminary and practical method of testing and evaluating a protective coating under conditions similar to those to which the film ultimately will be subjected.

Epoxy – Extremely tough and durable synthetic resin used in some coatings. Epoxy coatings are extremely tough, durable and highly resistant to chemicals, abrasion, moisture and alcohol.

Extender – Ingredients added to paint to increase coverage, reduce cost, achieve durability, alter appearance, control rheology and influence other desirable properties. Less expensive than prime hiding pigments such as titanium dioxide. Examples: barium sulphate, calcium carbonate, clay, gypsum, silica, talc. May also improve coating performance.

F

Fading – Loss of color through exposure to light, heat, or other agents.

Feathering – A term used to indicate that a film has been either sprayed, brushed, rubbed, or sanded down to a feathery edge in such a manner that there is a gradually decreasing thickness of the film, making it appear as though it were progressively disappearing into the next coat.

Filler – An inert or extending pigment such as China clay, barites, powdered mica, silica, whiting, etc.

Film Build – Amount of thickness produced in an application. Mils of dry film per mils of applied wet film.

Film Thickness – The thickness of an applied coating. Usually expressed in mils (thousandths of an inch). See “Dry Film Thickness” and “Wet Film Thickness.”

Fineness of Grind – The degree of dispersion of a pigment in a coating system. Usually expressed in arbitrary terms for 0 (very coarse) to 8 (perfect dispersion) and measured with a “fineness Gauge.”

Fire Retardant Paint – A coating which will (1) reduce flame spread, (2) resist ignition when exposed to high temperature or (3) insulate the substrate and delay damage to the substrate.

Flaking – a Coating film failure in which pieces of the film separate from the substrate.

Flash Point – An ignition temperature of the saturated vapor of a thinner or solvent.

Flat – A surface that scatters or absorbs the light falling on it so as to be substantially free from gloss or sheen

Flexibility – The property of coating films, which allows them to follow bending, stretching, or shrinking of the substrate without cracking or loss of adhesion.

Floating – The process of “flooding” in which the final color is not uniform, i.e., it may be streaked, spotty or otherwise not uniform. This happens when two or more colored pigments are used together and one has a tendency to float to the surface.

Flocculation – The process of agglomeration by which dispersed particles come together and either settle out of form a gel.

Flow – The characteristic in a paint, which manifests itself in the degree of leveling. In other words, paints that have good flow usually level out nicely, and exhibit few or no brush marks or “orange peel.”

Forced Drying – Drying at temperatures above room temperature but below 150° F.

Frosting – The condition which manifests itself as a semi-opaque or translucent coating such as in a crystalline structure.

Fungicides – Substances that destroy fungi and their spores, or inhibit their growth.

Fungus – Any of the group of thallophytic plants comprising molds, mildew, smuts, etc., which produce undesirable dark spots or a coating on a paint. In many cases, fungus has the appearance of dirt or soot. Fungus may just attach itself to a paint film or actually feed upon the paint film.

Galvanizing: – Process in which a thin coating of zinc is applied to iron or steel to prevent rust.

Glazing – The process of applying transparent or translucent pigments such as raw sienna, burnt sienna, etc., usually on a painted surface to produce certain blended effects, like in antiquing. Also the process of installing window glass in a frame is referred to as glazing.

Glazing Compound – A putty-like material used to fill in the cracks or crevices of a surface before it is covered with the protective coating, particularly around the edge of glass in a window frame.

Glazing Liquid – A special type vehicle to which pigments are added such as in glazing, antiquing and blending.

Gloss – The luster, shininess or reflecting ability of a surface, or the ability of a surface to reflect light regularly. While companies vary in their exact definitions, the following gloss levels are commonly used, in increasing order of gloss:

1. flat (or matte) - < 10° on a 60° meter
2. eggshell – 10-20° on a 60° meter
3. satin – 20-35° on a 60° meter
4. semi-gloss - 35-70° on a 60° meter
5. full-gloss - > 70° on a 60° meter

Gloss Meter – A device for measuring the light reflectance of coatings. Different brands with the same description (such as semi-gloss or flat) may have quite different ratings on the gloss meter.

Gloss Retention – The property of retaining the original gloss of a coating – not becoming flat or dulling.

Grain Checking – Checking of a paint coat parallel to the grain of the wood.

Grain Raising – The objectionable roughness of wood caused by the application and/or absorption of water. The roughness is due to the short broken fibers of wood which more-or-less stand up, due to the swelling or raising action of the liquid coating.

Graininess – The objectionable appearance of a pimply film due to aggregations of pigments, which can usually be detected with the microscope.

Ground Coat – The coat of material applied before the graining colors or glazing coat to give the undercoat the desired background color.

H

Hair Lines – The phenomenon manifest in coatings by fine lines in the paint films, which is really a form of checking. It is usually caused by sudden temperature changes or by weathering. Hair lines can best be detected by the use of a microscope of low magnification, when they are not visible with the naked eye. Very fine cracks in plaster are called “hair line” cracks.

Hardener – Curing agent for epoxies or fiberglass.

Hardness – The ability of a surface to resist penetration or scratching.

Heat-Resistant Finishes – Finishes designed to show little or no deterioration on continuous or intermittent exposure to an elevated temperature.

HEPA Vacuum – High-efficiency particulate air-filtered vacuum designed to remove lead- contaminated dust.

Hiding Power – The opacity of a paint, or its capacity to cover or obliterate, that which lies beneath it.

Hold-Out – the ability of a primer to seal a porous surface thereby preventing uneven gloss or color in topcoats due to unequal absorption of the top coat.

Holidays – A term often used to indicate a skipped or missed portion unintentionally left uncoated with paint.

Hot Spots – Areas in plaster which due to excess of free lime or other reasons have not cured to the degree that the rest of the wall has and which may attack paints because of excess active alkali

Hue – The specific quality distinguishing one color from another such as red, green and blue. This is only one of the attributes of color.

I

Incompatible – The term “incompatible” is used to indicate that a material cannot be mixed with another specified material without impairing the original properties. Also refers to types of paint that cannot be

applied one over the other-such as catalyzed epoxies are usually incompatible with alkyds.

Inert – The term usually applied to the various extender pigments such as barytes, silica, calcium sulfate, mica, talc, etc. In general, they have poor hiding power, since they are transparent in nature. However, their advantage lies in the fact that they are inert from both a chemical and physical standpoint. Although inert pigment often contributes some desirable properties to a paint, they are primarily added to cheapen paint.

Inhibitor – A material used to prevent rust or corrosion, or an agent, which arrests chemical reaction.

Intumescence – A mechanism whereby fire-retardant paints protect the substrates to which they are applied. An intumescent paint puffs up when exposed to high temperatures, forming an insulating, protective layer over the substrate.

L

Lacquer – A fast-drying usually clear coating that is highly flammable and dries by solvent evaporation only. Can be reconstituted after drying by adding solvent.

Latex – Originally, the juice of the rubber tree from which natural rubber was recovered. Later the term was applied to any fine dispersion of rubber, natural or synthetic, in water.

Latex Based Paint – General term used for water-based emulsion paints made with synthetic binders such as 100% acrylic, vinyl acrylic, terpolymer or styrene acrylic. A stable emulsion of polymers and pigment in water.

Lead – A metal, previously used as a pigment in paints. Discontinued in the early 1950s by industry consensus standard, and banned by the Consumer Products Safety Commission in 1978 because of its toxicity.

Leafing – The ability of an aluminum or gold bronze paint to exhibit a brilliant or silvery appearance. Good leafing is caused by using treated or coated pigments along with suitable bronzing liquids.

Leveling – Ability of a coating to form a smooth level film, on either a horizontal or vertical surface, independent of the method of application. A film, which gives good leveling characteristics, is usually free of brush marks or orange peel effects.

Lifting – The softening and penetration of a dried film by the solvents of another film resulting in raising and wrinkling.

Linseed Oil – Drying oil made from the flax seed. Used as a solvent in many oil-based paints. "Boiled" linseed oil can be used to protect wood from water damage. Sometimes used as a furniture polish.

Livering – An increase in the consistency of a paint or enamel resulting in a rubbery or coagulated mass. It is caused partly by a reaction between an acid vehicle and a reactive basic pigment, which produces a soap formation.

Luster – Having the appearance of depth. The term is also used as a synonym for gloss.

M

Masking – The process of temporarily covering areas of a surface to prevent the application of paint to areas where it is not wanted.

Material Safety Data Sheet (MSDS) – Information sheet that lists any hazardous substance that comprises one percent or more of the product's total volume. Also lists procedures to follow in the event of fire, explosion, leak or exposure to hazardous substance by inhalation, ingestion or contact with skin or eyes. Coatings manufacturers are required to provide retailers with an MSDS for every product they sell to the retailer. Sales clerks should make MSDSs available to retail customers.

Micrometer – The micrometer represents a method of physical measurement. We use the micrometer to measure thickness of paint films. Measurements are in millimeters – 1/1000 of an inch.

Mildew – A superficial growth produced by a fungus or organic substance.

Mill White – Mill whites are white paints of the enamel type for use on interior walls surfaces of industrial plants, office and school buildings, etc. They are usually offered in three types of finish – "gloss," "semi gloss," and "flat."

Mileage - A term used to indicate the square foot coverage over which a given amount of paint can be spread.

Mills – Any of various machines, which produce paints by intimately mixing pigments and vehicles.

Mineral Spirits – Paint thinner. Solvent distilled from petroleum.

Mist Coat – A very thin coat of paint applied by spray.

Moisture Resistance – The ability of a protective coating to resist or become impervious to moisture.

Multi-Color Finishes – Paint coatings, which contain particles of different colored materials, which retain their identity on drying, so that the film shows small areas of different colors.

N

Naphtha – A petroleum distillate used mostly by professionals (as opposed to do-it-yourself painters) for cleanup and to thin solvent-based coatings. A volatile organic compound (see VOC).

Nitrocellulose – The major constituent of most lacquers, made by reacting nitric and sulfuric acids with cotton.

Non-volatile – The portion of a coating left after the solvent evaporates; sometimes called the solids content.

O

Ochres – Also "ochers." Earthy iron oxides ranging in color from yellow to brown, and to red.

Oil Paint – A paint that contains drying oil, oil varnish or oil-modified resin as the film-forming ingredient. The term is commonly and incorrectly used to refer to any paint soluble by organic solvents.

Opaque – A material which will completely obliterate or hide an underlying material. The quality of not permitting light to pass through, or that which one cannot see through. Opposite of transparent. For instance, titanium dioxide and carbon black are opaque pigments because they possess usual hiding qualities or opacity.

Orange Peel – A surface in which small circular craters appear in the film that gives an appearance similar to the rind of an orange. The result of improper spray technique or the application of an enamel with a roller.

Oleoresin – A natural plant product that contains oil and resins. Turpentine is an example.

Overspray – Coating material which does not strike the surface to be sprayed but is wasted.

Oxidation – Chemical reaction upon exposure to oxygen. Some coatings cure by oxidation, when oxygen enters the liquid coating and cross-links the resin molecules. This film-forming method is also called "Air Cure" and "Air Dry." (Oxidation also causes rust on bare metals.)

P

Paint – A coating including resin, a solvent, additives, and pigments. Paints are generally opaque, and commonly represent the portion of the industry known as "architectural coatings."

Paint Remover – A chemical that softens old paint or varnish and permits it to be easily scraped off. Also called "stripper."

Paint Thinner – See Mineral Spirits

Peeling – The stripping of a paint film from the surface.

Permeability – The ability of a material, usually a vapor, to pass through a film.

Pigment – Insoluble, finely ground materials that give paint its properties of color and hide. Titanium dioxide is the most important pigment used to provide hiding in paint. Other pigments include anatase titanium, barium metaborate, barium sulphate, burnt sienna, burnt umber, carbon black, China clay, chromium oxide, iron oxide, lead carbonate, strontium chromate, Tuscan red, zinc oxide, zinc phosphate and zinc sulfide.

Piling – The defect of a wet coating film in which the coating does not level out smoothly. It is due to the application of too much coating in one spot.

Pin holing – A paint condition characterized by the presence of tiny holes in the paint film.

Pitting – A condition in which the film is marked by fine holes which do not go through to the substrate.

Plasticizer – They are added to impart such properties as elongation, elasticity or flexibility.

Polymer – Substance, the molecules of which consist of one or more structural units repeated any number of times; vinyl resins are examples of true polymers.

Polymerization – The interlocking of molecules by chemical reaction to produce very large molecules. The process of making plastics and plastic-based resins.

Polyvinyl Chloride – A synthetic resin used in the binders of coatings. Tends to discolor under exposure to ultraviolet radiation. Commonly called "vinyl."

Porosity – The property of a paint film, which permits the passage of liquids or vapors.

Primary Colors – They are yellow, red, and blue and are the basic colors used to make other colors.

Primers – First complete coat of paint of a painting system applied to a surface. Such paints are designed to provide adequate adhesion and sealing qualities to new surfaces or are formulated to meet the special requirements of the surfaces.

Putty – A dough-like mixture of pigment and oil which is used to set glass in window frames and to fill holes. Unlike caulking compounds, it sets to a hard mass on aging.

Q

Quick Drying – A material with a drying time of about four hours or less.

R

Rain Spots – Defects on paint film caused by raindrops, which contain small amounts of mineral substances. Also, flat spots or a discoloration in a dried film resulting from newly applied paint being rained on before it has set-up.

Receding Colors – Colors which give an illusion of withdrawing into distance such as cool colors in which blue predominates.

Reduce – To decrease or lower the viscosity or consistency of a product by the addition of a solvent or thinner.

Relative Humidity – The scientific method for expressing the amount of moisture in air. It is expressed in percentage and is an indication of the proportional amount of moisture that could be absorbed or held at that temperature.

Resin – Synthetic or natural material used as the binder in coatings. Can be translucent or transparent, solid or semi-solid. Examples: acrylic, alkyd, copal ester, epoxy, polyurethane, polyvinyl chloride, silicone.

Respirator – A mask worn over the nose and mouth to prevent the inhalation of toxic pigment particles, which may be suspended in the air during operations.

Rich – Usually used in connection with deep, dark or warm colors such as reds and/or browns.

Rosin – The resinous material obtained from the various pine trees and containing principally abietic acid. Wood rosin is a type, which is obtained from the stumps or other dead wood, using steam distillation. Gum rosin is obtained from the sap, which exudes from the living tree.

Runs – See “Sags.”

S

Sags – Areas of uneven coating produced by flow of excessively thick layers of wet coating. Sags and runs differ only in the shape and size of the affected areas.

Sandblasting – A process for cleaning a surface by air- or water-borne sand, prior to painting.

Saponification – A breakdown of an oil or oil modified-resin vehicle as a result of a reaction with active alkali.

Sealer – A coating designed to prevent excessive absorption of succeeding coats into porous surfaces or to prevent bleeding.

Secondary Colors – A mixture of any two primary colors. For instance, primaries blue and yellow when combined give green, a secondary color.

Seeding – The undesirable formation of relatively large particles in a coating, due to agglomeration of the pigment or gelation of the vehicle.

Semi-gloss Finish – A finish with a gloss intermediate between flat and gloss.

Settling – Separation of pigments in a paint.

Sheen – A faint luster as if from reflection, such as produced by metallic bronze powders, and evident on some metals such as bronze, zinc, etc. Sometimes used as a synonym for “gloss.”

Shelf Life – The period of time during which a packaged coating material may be stored and still remain suitable for use.

Shellac – A coating made from purified lac dissolved in alcohol, often bleached white.

Sienna – An earth pigment of a brownish-yellow color when raw, and an orange-red or reddish-brown when burnt. The color comes from the oxides of iron and manganese.

Silicone Resins – A resin used in the binders of coatings. Also used as an additive to provide specific properties, e.g., defoamer. Paints containing silicone are very slick and resist dirt, graffiti and bacterial growth, and are stable in high heat.

Skin – A touch layer or skin formed on the surface of a paint or varnish, caused by exposure to the air, which results in the oxidation or polymerization of the surface.

Solids – The part of the coating that remains on a surface after the vehicle has evaporated. The dried paint film. Also called Nonvolatile.

Solvent – Any liquid which can dissolve a resin. Generally refers to the liquid portion of paints and coatings that evaporates as the coating dries.

Spar Varnish – A very durable varnish for exterior exposure. Such a varnish must be resistant to rain, sunlight, and heat.

Specifications – A penetrating composition that changes the color of a surface, usually transparent and leaving practically no surface film. Also, a discoloration of a coating produced by outside agencies.

Substrate – Any surface to which a coating is applied.

Surface Preparation – A general term referring to the preparation which must be given a surface, whether wood, metal, or other material, before coating is applied.

Synthetic Resins – Complex organic substances, produced by chemical reaction, which approximate the natural resins in appearance, but usually have properties superior to those of natural resins for paint manufacture.

T

Tacky – (Same as “tackiness” or “stickiness”). An arbitrary term used to describe the drying condition of a paint or varnish film. The stage in drying between wet and hard when the finish is “sticky.”

Tensile Strength – The ability or resistance of a film to withstand pulling stresses.

Texture – The general physical appearance, or the impression created by a surface structure. Texture generally infers an uneven or rough surface.

Thermoplastic – The term applied to materials, which become hard after heating and which cannot be resoftened.

Thinner – Volatile organic liquid used to adjust the consistency or modify the other properties of a coating. The portion of a coating, which evaporates during the drying process.

Thixotropy – Any change in the consistency of a paint or enamel, which occurs when it is allowed to stand in an undisturbed condition. If the material increased in “body,” it is called “positive thixotropy,” whereas if the body decreases, the term is “negative thixotropy” is used. Thixotropic generally infers a heavy bodied paint.

Tint – A color let down with white...or a shade of a color, such as pastel shades. Tints are thus made by blending a small amount of a full strength color with a white paint.

Tinting Strength – The coloring power of a given quantity of a paint or pigment.

Titanium Dioxide – White pigment in virtually all white paints. Prime hiding pigment in most paints.

Tooth – The condition of a flat or non-glossy surface, which allows a succeeding coating, film to adhere readily. See Adhesion, Mechanical Adhesion.

Total Solids – What remains of a coating after evaporation of the volatile portion. See “Non-Volatile.”

Toughness – The ability of a hard finish to resist bending, impacts or distortion without cracking. The opposite of brittleness.

Traffic Paint – A paint, usually white, or yellow, used to designate traffic lanes, safety zones and intersections. It is highly reflective, has excellent weathering qualities and high resistance to abrasion. Most traffic paints dry in one hour or less.

Transparent – The opposite of Opaque. Admitting light to pass through a substance so that object may be seen clearly through it, such as window panes.

Turpentine – Distilled pine oil, used as a cleaner, solvent or thinner for oil-based and alkyd coatings.

U

Ultraviolet Light – Energy of shorter wavelength than visible light. Ultraviolet light from the sun is responsible for much paint film deterioration on exterior exposure. It also activates fluorescent paints.

Umber – Used exclusively as a brown pigment. It is a hydrated iron manganese ore running from olive shades in the raw condition and dark rich brown shades in the burnt stage.

Undercoat – A coating film applied in preparation for a finish coat to be applied over it

Urethane – An important resin in the coatings industry. A true urethane coating is a two-component product that cures when an isocyanate (the catalyst) prompts a chemical reaction that unites the components.

V

Varnish – Any homogeneous transparent or translucent liquid, which when applied as a thin film, dries on exposure to air to a hard film giving a decorative and protective coating to the surface which it is applied.

Varsol – Mineral spirits.

Vegetable Oils – Oils obtained from the seeds or nuts of vegetable growth. This includes such oils as linseed, soybean, perilla, hempseed, tung and castor oils, etc. The principal use of vegetable oils lie in the use of making alkyd paints and varnishes, in which case it provides a binder with drying qualities.

Vehicle – Portion of a coating that includes all liquids and the binder. The vehicle and the pigment are the two basic components of paint.

Viscosity – A measure of the resistance of a liquid to flow.

V.M. & P. Naphtha – The abbreviation for Varnish Maker’s and Painter’s Naphtha. See *Naphtha*.

VOC – See *Volatile Organic Compounds*

Volatile – A material that evaporates. This term is used to indicate the relative rapidity of evaporation of any solvent.

Volatile Organic Compound – Organic chemicals and petrochemicals that emit vapors while evaporating. In paints, VOC generally refers to the solvent portion of the paint which, when it evaporates, results in the formation of paint film on the substrate to which it was applied.

Volume Solids – Solid ingredients as a percentage of total ingredients. The volume of pigment plus binder divided by the total volume, expressed as a percent. High-volume solids mean a thicker dry film with improved durability.

W

Warm – Any color in which red-orange predominates. The term “Warm” is applied to these colors because of their association with heat, sunshine, and fire. Opposed to cool colors in which blue predominates.

Washing – A type of film failure characterized by a surface that can be scrubbed off when wet, forming a soapy emulsion.

Waste Management Hierarchy – In descending order:
Source reduction
Reuse
Recycling
Reclamation
Treatment
Disposal

Water-based – Coatings in which the majority of the liquid content is water.

Water Spotting – An imperfection in a dried paint film manifested by spotty changes in the color or gloss. Water spotting may be caused by various factors such as emulsification or the solution of water-soluble components. See *Rain-Spots*.

Weatherometer – An electrical instrument used to accelerate the weathering of paint and varnish films by exposure to a powerful light.

Wet Film Thickness – The original thickness of a coating, as applied, before evaporation of the solvent.

Wetting Agent – Substances, which lower the surface tension of water to help dispersions.

Whiting – An inert, white amorphous pigment composed principally of calcium carbonate. Used extensively for making putty, and as an extender in paints.

Wood Alcohol – Same as methyl alcohol or methanol. This is the term often used by the laymen.

Wrinkle Finish – A varnish or enamel film, which exhibits a novelty effect very similar to fine wrinkles or irregular ridges.

X

Xylol – A clear water-white liquid, similar to toluol, but with a higher boiling point. Used as a solvent for lacquers and enamels.