



# TERMINOLOGY

**ACRYLIC:** Synthetic resin used in high-performance paints and coatings. A paint or coating in which the binder contains acrylic resin.

**ASTM:** American Society for Testing Materials

**ABRASION RESISTANCE:** Resistance to being worn away by rubbing or friction; related more to the durability than to the hardness of a paint or coating.

**ADHESION:** The ability of a paint or coating to stick to or attach to a surface and remain fixed for a period of time without blistering, flaking, cracking, peeling or being removed by tape.

**AIRLESS SPRAYING:** The process of atomizing paints and coatings by use of hydraulic pressure rather than air pressure. The paints and coatings are pressurized between 1,000 – 3,000 psi, then forced through the small opening of a spray tips.

**ALLIGATORING:** A condition of a paint film where the surface is cracked and has the appearance or pattern similar to that of the hide of an alligator. Common causes include intercoat adhesion, solvent entrapment and excessive coats of paint.

**ALKYD:** Synthetic resin modified with oil that exhibits good adhesion to clean surfaces, good gloss and color retention, moisture resistance and flexibility. Typical paints and coatings that contain alkyd resins are thinned or reduced with mineral spirits.

**BACK PRIMING:** The application of a paint or coating to the back side or non-exposed surface of woodwork and exterior siding to prevent moisture from entering the wood.

**BINDER:** The resin portion of a paint or coating. The binder holds the pigment particles in suspension and attaches them to the substrate. The type and amount of binder determines the paint or coating's performance properties such as washability, adhesion, durability, color retention, etc.

**BLEEDING:** The diffusion or staining of color through a topcoat of paint or coating from underlying surfaces.

**BLISTERING:** Bubbles or pimples formed on the paint film. Common causes are moisture in the substrate, solvent entrapment, excessive heat or surface contamination.

**BLOCKING:** The sticking or adhering of two painted surfaces when they come in contact with each other.

**BLOOMING:** A haziness or whitening that develops on paint surfaces usually caused by moisture condensing on or being trapped under the paint film during application. Also known as blushing.

**BOXING:** The process of mixing paints and coatings together by pouring from one container to another. Contractors will box material in the field to help verify color and sheen uniformity.

**BREATHABLE PAINTS:** Paints that allow the passage of moisture vapor through the paint film. Also see PERMEABILITY.

**BRIDGING:** The ability of paints and coatings to span small cracks or gaps through cohesion and elastic properties.

**BRUSH MARKS:** The appearance of ridges and valleys in the dried film of paint. Common causes are poor application tools or techniques, insufficient film build or dry time between coats and application over an extremely porous substrate.

**CALCIMINE:** A type of paint composed essentially of calcium carbonate or clay and glue that was commonly used as a finish on plaster.

**CASEIN PAINT:** A type of paint which included casein (protein derived from milk) is used as the binder.

**CATALYST:** The activator which chemically accelerates the rate of reaction in a coating. Two-component products such as epoxies and aliphatic urethanes require the use of a catalyst to solidify the paint film. Also known as curing agent, hardener, converter, accelerator.

**CAT EYE:** Description of a hole or holiday in a paint or coating film shaped like a cat's eye. Also known as cratering and fish-eye. Common causes are solvent or air entrapment.

**CHALKING:** The formation of a powder on the surface of a paint or coating film caused by the deterioration of the binder in the product. Chalking paints are also known as self-cleaning paints.

**CHECKING:** Formation of small cracks in the film of paints and coatings. Checking commonly occurs when a paint film loses its elasticity, most often due to age.

**CHROMA:** A measurement of brilliance or intensity of a color.

**COATING:** An advanced or specialized paint designed to have a specific function pertaining more to the protection rather than the aesthetics of a substrate. Coatings will maintain a DFT higher than that of paint films.

**COALESCENCE:** A type of drying and curing process of water-based paints and coatings.

**COBWEBBING:** A spider web effect caused by the premature drying of a sprayed paint or coating.

**COHESION:** The bonding of paint particles to one another, across the film of paint.

**COLOR RETENTION:** The ability to retain and preserve the original color for an extended period of time.

**COMBUSTIBLE LIQUID:** A liquid having a flash point at or above 100° F.

**CONVENTIONAL SPRAYING:** The process of atomizing paints and coatings by use of air under moderate pressure.

**CRAWLING:** A condition where a paint or coating will slide or draw away from areas during application, leaving bare or unpainted areas. Common causes are surface contamination (wax, oil, grease, etc.) and painting over an extremely hard or non-porous surface.

**CROSS-LINKING:** A type of drying or curing process for paints and coatings.

**CURTAINING:** The formation of runs and sags in a dried or cured film of paint which resemble curtains. Common causes are excessive application of paint, excessive thinning or application over a substrate that's temperature is too cold. Also known as sagging and running.

**CUTTING IN:** An operation where the application of paints and coatings are applied to the edges of substrates, usually by a brushing method.

**DELAMINATION:** The act of separation between layers of paint and coating films.

**DRAG:** The resistance that a paint or coating has when applied by brush.

**DRY FILM THICKNESS (DFT):** The measurement of a dry films of paints and coatings, usually expressed in millimeters or microns. Measuring wet films is usually performed with a tool called a wet mil gauge. Dry films are commonly measured using micrometers.

**DRY FOG:** A fast-drying paint that is usually spray applied to metal ceilings. As the paint overspray falls during the application, the overspray dries as fine dust that can be swept up with ease. Also known as dry fall, drop dry, dry drop, Millwhite, Millite

**DRY-TO-TOUCH:** The first stage of drying or curing when the paint or coating can be lightly touched without removing any paint.

**DRY-TO-HANDLE:** The stage of drying or curing when the paint or coating has hardened sufficiently so that the object may be touched without fear of marring or damaging the film.

**DRY HARD:** The final stage of drying and curing. The film is hard when pierced with a fingernail.

**DRY TO RECOAT:** The stage of drying or curing when the next coat may be applied. Select paints and coatings have a "window of opportunity" in which a successive coat must be applied for proper performance.

**ENAMEL:** A broad classification referring to a paint or coating that dries or cures to a hard finish.

**ENAMEL HOLDOUT:** The ability of a substrate (paint) to prevent the soaking in of the next coat. A paint with proper enamel holdout will provide a surface with even porosity to aid in the uniform appearance of the succeeding coat.

**EFFERVESCENCE:** An effect in the film caused by rapid solvent release. Bubbling action causes a pinholed or cratered appearance in the film, reducing gloss or sheen levels and creating a non-uniform appearance.

**EFFLORESCENCE:** As moisture evaporates from brick, concrete and masonry, water-soluble salts are deposited on the exterior surface. The deposits are usually white in color and must be removed before applying paints & coatings.

**ELASTOMERIC:** A thick, acrylic-based coating that has the ability to recover to its original size after deformation. The formation of a rubber-like skin provides excellent waterproofing properties. Commonly recommended over exterior masonry substrates.

**ELECTROSTATIC SPRAYING:** Technique for providing a smooth, spray-applied coating using electrical resistivity. The coatings are given an electrical charge at the gun while the metal substrate is given an opposite electrical charge.

**EMULSION:** A mixture of solids and resins suspended in a liquid which will flow together with the aid of an emulsifier. Latex paints are considered emulsions.

**EPOXY:** A type of resin used in paints and coatings. Epoxies are available in many different forms: one- and two-component versions, water- and solvent-based versions, polyamide, amine, acrylic, etc. Epoxies offer exceptional adhesion properties and are normally prescribed where chemical and abrasion resistance are required.

**EXTENDER:** A filler, usually a pigment, used to provide bulk or strength to a paint or coating film.

**FADING:** The loss of color; lightening or bleaching of color due to exposure to light, heat, chemicals, etc.

**FINGERING:** A broken spray pattern delivering heavier paint to one area of the spray pattern than another.

**FLAKING:** Detachment of a dried paint film in relatively small pieces. Flaking is usually preceded by cracking and blistering.

**FLAMMABLE:** A liquid that can easily be ignited in the presence of a flame; a flash point of less than 100° F.

**FLASH POINT:** The lowest temperature at which the solvent vapor and air form an ignitable mixture.

**FLASH RUSTING:** Visible rust (blotchy or freckles) appearing on ferrous surfaces when conventional waterborne finishes are applied over exposed ferrous metals. Flash rusting may be avoided, at a nominal cost, with the inclusion of flash rust-inhibitive pigments in the product.

**FLASHING:** Uneven gloss across the dried film of paint.

**FLOATING:** A concentration of ingredients that appears near the top level of liquid. Usually colorants, binders or solvents.

**FUNGICIDE:** A substance that retards and prevents the growth of fungi such as mildew.

**GLOSS:** The luster, shininess or light reflection of paints and coatings. Gloss levels are measured using a 60° meter. Gloss levels and descriptions are categorized as follows

Flat	0 - 5 units @ 60 degrees
Eggshell	5 - 20 units @ 60 degrees
Low Lustre/Satin	15 - 35 units @ 60 degrees
Semi-Gloss	30 - 65 units @ 60 degrees
Gloss	65 + units @ 60 degrees

**GLOSS RETENTION:** The ability to retain and preserve the original gloss for an extended period of time

**HARDENER:** see CATALYST.

**HIGH-BUILD:** A definition of a paint or coating film which can produce a thick film in a single coat. Many high-build products are self-priming to gypsum board and concrete.

**HIGH VOLUME – LOW PRESSURE SPRAYING:** The process of atomizing paints and coatings by use of air under low pressure. Also known as HVLP.

**HOLIDAY:** A bare or thin spot in a painted area.

**INDUCTION TIME:** A measurement of time to allow the chemicals of a multi-component paint or coating to react together. This measurement of time insures that this reaction has occurred. Also known as sweating & dwell time.

**INTERMEDIATE COAT:** The coating between a primer and a finish. Also known as a barrier coat, guide coat and tie coat.

**INTUMESCENT:** A paint or coating that will provide a fire retardant finish. The film will swell and convert to a foam, thereby insulating the substrate. Not to be confused with Class "A" materials.

**LAITENCE:** A weak surface layer formed on concrete due to flotation. May be light in color and somewhat powdery. Laitence must be removed for good coating performance.

**LAMINATION:** The process of combining or adhering one layer to another, such as coats of paint.

**LAPPING:** The area of overlap between two separate areas of the same paint. This area may appear glossier or hide better than surrounding areas due to the additional film thickness.

**LATEX:** A general term describing a type of paint. Latex paints are water-based emulsions made with synthetic binders. Types of latex paints include 100% Acrylic, vinyl acrylic, vinyl latex and polyvinyl.

**LIFTING:** Softening, raising and wrinkling of a paint film usually caused by strong solvents in the topcoat.

**LIGHT REFLECTANCE VALUE (LRV):** The amount of light reflected off of a specific color. Light colors have a higher LRV and dark colors have a lower LRV.

**LINSEED OIL:** Drying oil made from the Flax seed. Used as a solvent in many oil-based paints.

**MASTIC:** A heavy-bodied, high-build coating.

**MATERIAL SAFETY DATA SHEETS (MSDS):** An information sheet that lists any hazardous substances that comprise one percent or more of the product's total volume. Also lists the procedures to follow in the event of any emergency such as fire, explosion, contact with skin and eyes, etc. Paint and coating manufacturers are required to provide MSDS to all purchasers of their products.

**MILAGE:** Describes the coverage rate of paint and coatings. Usually listed in square feet per gallon.

**MILDEWICIDE:** An agent that helps prevent mold and mildew growth on paint films.

**MILL SCALE:** A layer of oxides formed on steel during manufacturing. Mill scale must be removed for good coating performance.

**MILS:** The measurement unit of either wet or dry paint films: 1 mil equals one one-thousandth of an inch. (.001); 1 mil equals 25 microns.

**MINERAL SPIRITS:** A paint thinner, reducer and clean-up solvent for alkyd and oil-based paints and coatings. Mineral spirits is a solvent distilled from petroleum.

**MIST COAT:** A thin coat of paint by spray application. Also known as tack coat.

**MIXING RATIO, BY VOLUME:** The proper mixing ratio, by volume, of each component in a kit.

**MOISTURE VAPOR TRANSMISSION (MVT):** The migration of moisture vapor through a substrate. MVT is measured in perm units.

**MULTICOLOR FINISHES:** Paints that contain flecks of different colors different from the base color. Also known as Speckled finishes.

**NON-FERROUS:** Describes metals that do not contain iron. Non-ferrous metals include zinc, aluminum, copper, etc. A simple method for determining if a metal is ferrous or non-ferrous — non-ferrous metals are not magnetic.

**NON-TOXIC:** Non-poisonous.

**NONVOLATILE:** The portion of paint left after the solvent evaporates. Sometimes called the solids content.

**OIL LENGTH:** Usually refers to the drying time of an alkyd paint. Long oils = slower drying; short oils = faster drying.

**OPACITY:** Describes the hiding power of a paint or coating.

**ORANGE PEEL:** A condition describing the appearance of a dimpled paint film. Caused by excessive film build, incorrect application technique. Also describes a type of textured finish available.

**OVERSPRAY:** Atomized paint from spray equipment that was not applied to its intended target. Also known as waste.

**OXIDATION:** A type of drying and curing process that requires the paint or coating to be exposed to oxygen in order for the product to completely dry. Also known as air dry and air cure.

**PAINT:** A mixture of pigments, binders and solvents that form a continuous film that can be decorative and protective.

**PEELING:** Detachment of a dried paint film in relatively large pieces. Usually caused by moisture or contamination under the painted surface.

**PIGMENTS:** The powder portion of the paint film providing hide, corrosion resistance and color.

**PINHOLE:** A film defect characterized by small, pore-like flaws in a paint or coating which extend entirely through the film.

**POLYURETHANE:** A type of resin that is offered in a wide range of paints and coatings. Polyurethanes are available in one- and two-component versions. Polyurethanes offer good adhesion, color and gloss retention, and favorable chemical-resistance properties.

**POT LIFE:** A measurement of time regarding the mixture of a multi-component paint mixture. Pot life is the time that the product remains usable before the reactive ingredients solidify.

**PRIMER:** The first complete coat of paint of a painting system. Primers are designed to provide good adhesion to the substrate while providing a surface of even porosity for the succeeding coats of paint.

**REBOUND:** Similar to OVERSPRAY. The atomized paint was applied to its intended target but bounced off due to excessive material pressure during spray application.

**RECOAT WINDOW:** A measurement of time between the application of a primer or intermediate coat and an additional coat.

**REDUCER:** A material which lowers the viscosity but is not necessarily a solvent for the particular film former. Also known as thinner.

**RESIN:** A natural or synthetic material that is the main ingredient of paints and coatings. Resins, also known as binders, bind the ingredients together. Resins also provide the adhesion properties for the finish.

**RETARDER:** A solvent or agent that is added to a paint or coating to slow the drying or curing process. Also known as retarding thinner.

**ROPINESS:** A paint finish that dries with a “stringy” appearance due to the lack of flowing capabilities of the paint.

**RUNS:** See CURTAINS.

**SSPC:** Steel Structures Painting Council.

**SAGS:** See CURTAINS.

**SANDING SEALER:** A type of paint that is applied to wood substrates to seal the surface and fill any minor imperfections. Sanding Sealers are transparent, dry fast, and may be applied, sanded and topcoated within the same day.

**SAPONIFICATION:** The chemical formation of “soap” on a paint film.

**SCRUBABILITY:** The ability of a paint or coating film to withstand scrubbing and cleaning with water, soap, detergent and other mild, non-abrasive household cleaning agents.

**SEMI-TRANSPARENT:** A degree of opacity (hiding) greater than transparent but less than opaque.

**SERVICE TEMPERATURE LIMIT:** The maximum temperature recommended for that specific paint film under dry heat conditions.

**SET-UP:** A paint or coating that has dried so that it is firm is said to have “set-up.”

**SHEEN:** The level of gloss or light reflection of a paint film measured at an 85° angle. Flat and low luster finishes are more accurately measured using this method.

**SILICONE:** A type of resin used in the binder of coatings. Products containing silicone resist dirt, graffiti and bacterial growth.

**SKINNING:** The formation of a membrane on the top of a liquid caused by the partial curing during storage.

**SOLIDS:** The portion of the paint or coating that remains on a surface after the vehicle (liquid portion) has evaporated; The dried paint film. Also known as the non-volatile portion.

**SOLID COLOR:** A degree of opacity (hiding) of an exterior stain. Solid color stains provide the same opacity as that of a paint.

**SOLVENT:** The volatile (evaporating) portion of the paint composition; any liquid that can dissolve a resin.

**SOLVENT-BASED:** Paints and coatings in which the majority of the liquid content is a solvent other than water.

**SOURCE REDUCTION:** Steps taken to reduce waste generation and toxicity at the source through more effective utilization of raw materials and reformulation.

**SPAR VARNISH:** A very durable varnish designed for service on exterior applications.

**SPATTER:** Small particles or drips of paint thrown when applying paint with a roller cover.

**SPECULAR GLOSS:** Mirror-like finish, usually 60° on a 60° meter.

**SPOT PRIMING:** Applying a primer to a localized spot.

**SPREADING RATE:** The application rate at which a paint can be spread, usually expressed as square feet per gallon.

**STAIN:** A transparent, semi-transparent or opaque coating applied to porous substrates such as wood, concrete and masonry.

**SUBSTRATE:** Any surface to which a coating is applied.

**SURFACE PROFILE:** Describes the condition of surface that is to be painted. Paint films adhere to “microscopically rough” surfaces better than that of smooth surfaces.

**SURFACTANT:** An additive that promotes surface wetting.

**TACKY:** The sticky condition of a paint or coating during drying, between the wet and dry-to-touch stage.

**THINNERS:** Solvents used to thin, reduce or clean-up wet paints and coatings.

**THIXOTROPIC:** Describes full-bodied materials that will “thin out” when agitated, shaken, stirred, brushed or rolled.

**TITANIUM DIOXIDE:** White pigment in virtually all white paints and coatings. Provides excellent hiding power.

**TOOTH:** The profile or anchor pattern of a substrate or paint film.

**TOUCH-UP:** The ability of a paint or coating to be spot-repaired without showing color or gloss differences.

**UNDERCOAT:** A primer or intermediate coat of paint.

**URETHANE:** See POLYURETHANES

**VARNISH:** A transparent version of paint usually applied to wood substrates.

**VEHICLE:** The liquid portion of a paint or coating. Vehicles are mainly composed of solvents, resins and oils.

**VISCOSITY:** The thickness or fluidity of a paint or coating relating to its ability to flow as a liquid.

**VOLATILE ORGANIC COMPOUND (VOC):** Organic chemicals and petrochemicals that emit vapors while evaporating. The VOC content is listed as pounds per gallon and grams per liter. VOC limits are regulated by the EPA.

**VOLUME SOLIDS:** The percentage of a unit of paint that remains on the surface after the solvent has evaporated.

**WASHABILITY:** The ability of a paint or coating film to withstand washing and cleaning with water, soap, detergent and other mild, non-abrasive household cleaning agents.

**WATER BLASTING:** Using equipment that applies water under high pressure to clean a surface. Commonly used to prepare exterior surfaces for repainting.

**WET EDGE:** The fluid boundary at the edge of wet paint and the dry substrate. Applicators maintain a wet edge to aid in providing a smooth, uniform finish, especially on large, smooth surfaces.

**WET FILM THICKNESS:** The thickness of a wet coat of paint.

**WET MIL GAUGE:** A tool used to measure the thickness of a wet film of paint.