Encyclopedia of lacquer





Accelerator

Substance that is added in small amounts, e.g. accelerates cross-linking.

Acrylic

A type of synthetic polymer used as a binder for high performance waterborne paints and sealants. Some acrylate polymers are used for automotive and equipment paints, etc.

Acrylic resin paints

Synthetic resin lacquers based on acrylic acid ester and metacrylic acid ester are characterized by fast drying, excellent clarity, light resistance and gloss. They are particularly suitable for metallic effect paints and bright shades.

Acrylic varnish

Coating material based on synthetic, thermoplastic, filmbildendem material dissolved in water, which dries by evaporation of the water.

Active pigments

Pigments that form a chemical compound by saponification with the binder and thus offer favorable properties with optimum corrosion protection, e.g. lead nibs, zinc chromate

Additional injections

Painting in a basecoat to match the colour tone to adjacent surfaces Subsequently, full-part painting with clear lacquer is required.

Additive

A substance added in small quantities to a coating material to impart specific properties to that coating or to the coating produced therefrom.

Hint:

The terms "additive" and "excipient" are used in the same sense.

Adhesion

The attachment force of substances to each other. It is of great importance in coating technology because it acts as an adhesive force on substrates.

Adhesiveness/adhesiveness

Measure of the resistance of a coating to mechanical separation from the substrate. Adhesion is probably the most important property of a paint or sealant.

Adjustment additives

Generally referred to as dilution These are liquids which, in addition to the actual solvents, convert the paint material into a viscosity suitable for processing. The speed of evaporation of the solvents contained in an adjustment additive influences the flow, tightening, film formation and curing. The adjustment additives must belong to the system used and be matched to the paint material.

Aerosol

Product (paint or varnish) that is in a pressure-resistant spray can together with a propellant and can be sprayed on.

Agitation

Storage causes the heavier components of the paint material to settle in layers on the bottom of the container. They must be homogeneously distributed again before processing. It is advisable to

338 Encyclopedia of lacquer

remove dust from the lid and can rim before opening. After opening, the lower layers are gradually grasped and stirred starting in the upper, liquid part of the material with a stirring rod until no more sediment can be felt.

Airbrush

Application procedure for artistic design of Oberflächen with special tools and techniques, e.g. airbrush pistol

Air drying

Drying of an applied coating material without additional heat supply

Airless syringes

Spraying method without atomizing air. The paint material to be sprayed is pressed through very fine nozzles at a high pressure of approx. 150 - 200 bar, whereby a very fine atomisation is achieved. Due to the lack of atomizing air, a low spray mist painting is possible. Very high area performances can be achieved with appropriate nozzle selection. Due to a strong reduction of the spray mist, the practical yield is considerably higher than with air atomization.

Alkyd resin

Synthetic resin used in synthetic resin-based paints. An alkyd resin is produced by reacting a dry oil with a hard synthetic material.

Aluminium paint

A paint, normally solvent-based, containing aluminium particles and imparting a metallic appearan-

Antistatic agent

A substance which reduces electrostatic charging of the surface of a material

Application

The application of coating material (painting, rolling, spraying, dipping, rolling, etc.) on objects.

Applied hiding power

Refers not only to the opacity of the Anstrichfilms, but also to how the paint covers, depending on film thickness and gradient, taking into account how the paint is applied (brushes, rollers, sprays, etc.).



Baking

A common name for a process for heat curing in which the curing reaction only begins after a specific temperature for the coating material has been exceeded. An air-drying paint does not become a stove enamel through heat-accelerated drying.

Barrier agent

Means for preventing effects of substances from the substrate on the coating, from the coating on the substrate or between individual layers of a coating

Hint:

The term "insulating material" still used for this should be avoided in order to avoid mix-ups with heat and sound insulation materials and electrical insulation materials.

Base

Area in which a new paint layer overlaps an existing paint layer. This area is created by spot-repairing and auxiliary painting. It is important that the transition is not visible.

Base coat

The base coat is the colour tone and effect giving lacquer layer of a two-coat lacquering. It must be coated with a clear coat to ensure that the effect is visible and the coating remains durable. The dry film thickness of the basecoat is approx. $20 \mu m$.

Basecoat concentrates

Uni, metallic and pearlescent base colours belonging to a colour mixing system, which, in contrast to conventional base colours, are concentrated and diluted accordingly only before processing.

Base colours

Basic colours have a certain basic shade (red, yellow, blue, etc.) from which every imaginable shade and nuance can be mixed. The mixing is done with a color mixing bench (mixing system) according to mixing formulas on a scale.).

Binders

Dissolved fractions of a coating material of a coating without pigments and fillers, but including plasticizers, drying agents and other auxiliaries nichtflüchtigen.

The binder bonds the pigment particles to each other and to the substrate, forming the finished coating together with them. They dry physically or chemically and form a cohesive, durable coating film. The type and quantity of binder are decisive for many performance characteristics of the paint, such as washability, toughness, adhesion, colour retention and weather resistance. In pigment- and filler-free coating materials, the binder comprises all nichtflüchtigen components. Relatively volatile substances are also part of the binder if they become part of the coating as a result of a chemical reaction. see also "Solvents

Biocide

A biologically effective additive in paints and sealants, which is added so that bacteria cannot spoil the paint or mass during storage or so that the applied Anstrichfilm is not spoiled by mould.

Bleaching

Reduced saturation of the colour of a coating; colour pigmented coatings that fade or grey when exposed to sunlight, moisture or chemicals, often due to lack of light fastness and excessive white blending.

<u>Hint:</u>

Bleaching must not be confused with chalking.

Bleeding

The penetration of colorants in a coating or the migration of soluble pigment components from old coatings to the surface of overpainted paint films This is reflected in color changes. Today, almost no bleeding pigments are used for the production of automotive coatings. The old paintwork may have to be removed completely if insulation is not successful in less stubborn cases.

Blending agents

Adding inexpensive substances to the components of putty and coating materials without adversely affecting their properties and quality

Blistering

Formation of hemispherical, hollow bulges, also gas or flüssigkeitsgefüllte inclusions in the paint film

Blood / Blood circulation

See also "Bleeding".

Blow

The substrate or the existing old paint coat of an object to be painted is dissolved by the solvents and thinners contained in the paint material used during overpainting. This is desirable for plastic substra-

340 Encyclopedia of lacquer

tes (good adhesion), unfavourable for old paintwork (paint structure becomes unusable).

Boil-out

If the material application is too high and the prescribed flash-off times are not observed, tiny bubbles may form during the drying process which are known as cookers and look like pinholes in the paint film.

Bonding

Do not dry out the base materials or apply paint too thickly. Too high additions of dry accelerators can also cause sticking.

Breathing

Permeability of water vapour from the subsurface through Anstrichfilm

Brilliance

Expression for a special reflective property of a high-gloss, fog-free surface

<u>Hint:</u>

The term colour tone is mainly used in colour metrics. The word hue is often used in practice for color, coloration, colored appearance and not in the sense of the definition given here for hue.



Calcium carbonate

A naturally occurring material (lime, chalk) used as a filler or diluent for paints and sealants

Capillarity

Ability of porous bodies with very narrow pores (hair tubes) to suck up fluid, even against the law of gravity. The suction power of cleaning cloths or the creeping power of cavity wax in car body gaps is based on this effect.

Catalyst

A substance that initiates or significantly accelerates a chemical reaction. For example, the curing of polyester resin-based base materials is carried out using peroxides as catalysts.

Cavity sealing

Coating of body cavities to prevent corrosion damage. The material, mostly wax-based, is applied hot (factory) by flooding or cold (repair) with special paint spray guns. The cavity sealant does not harden. is highly creepable, corrosion-inhibiting, water-infiltrating and has good adhesion.

Chalking

Destruction of the binder by chemical or weather-related influences The pigments lose their embedding in the binder and come off the Lackoberfläche. The painted Oberfläche becomes matt, dull and pale.

Chalks

Impairment of the surface of a coating by peeling off pigments and fillers. The result is the degradation of the binder in the coating layer. The result is a bleached, powdery substance.

Chemical resistance

The property of a coating to be insensitive to the action of chemicals.

Chlorinated rubber

Paint binder produced by the deposition of chlorine on dissolved rubber and used in the manufacture

of paint material characterised by exceptional resistance to acids and alkalis.

Chromatic shade

Term for the colorfulness of a color It is generally referred to as red, yellow, green, blue, violet, etc...

Clear lacquers

Varnish without hiding power. In vehicle painting, it is the final coat in two- or multi-layer painting. It is intended to protect (isolate) the base coat from external influences and enable the visibility of paint effects.

Coating

Liquid to paste-like coating material, which is mainly applied by brushing, rolling or spraying. Paint materials named after the binder must contain enough of this to ensure that its characteristic properties are present in the paint material and the coating.

Coating

Still commonly used for a pigmented lacguer, mostly in the craft sector

Coating

Generic term for one or more contiguous layers made of coating materials on a substrate. The coating material can penetrate more or less into the substrate. Multilayer coatings are also referred to as a coating structure (coating system). The coating can be marked in more detail according to various criteria:

- by type of coating material
- by type of coating process

If the coating material has formed a continuous layer, this is also referred to as a coating film (wet or dry).

Hint:

Coatings within the meaning of this standard are paints, varnishes, synthetic resin plasters, fillers, fillers and similar coatings. The terms coating, painting and varnishing are sometimes used alternatively.

The connection between the generic term coating and a number of subterms is illustrated using examples in the following system of terms with three subdivision levels. In the subdivision level after the generic term coating, the important terms coating and varnishing are equally important. In the last subdivision level, terms are listed which are derived from the terms of the level above.

Cohesion

Cohesive force of similar substances, e.g. within a paint film

Colorants

Generic term for all colouring substances

Color cast

The colour of a sample which is almost white or almost uncoloured and causes the colour of the sample to differ from ideal white or (ideal)-uncoloured.

Color circle

Circular pattern with wedge-shaped sections in various specific colours. The colour circle is used for colour matching. The "Ostwald sche color wheel" is well known.

Color ground tone

Basic tone of a color, e.g. red or green. Lighter or darker variations always have the same keynote. Consequently, a light red and a dark red both have the same basic shade.

Color piaments

Term for insoluble, solid colored bodies, in contrast to soluble, organic dyes and colorants. see "Pigments".

Colour

Colour is only a sensory impression conveyed by the eye. The term colour is mistakenly used for the pigment or the brushable or sprayable lacquer colour, but in itself only designates the coloured appearance, i.e. red. vellow, green etc...

White light consists of different wavelengths and is broken down into a colour ribbon, the so-called spectrum, with the aid of a prism as a result of the different degrees of refraction. The wavelength range optically perceivable by humans begins with the long-wave red rays and continues in orange. vellow, green and indigo to the short-wave violet rays.

Colourfast

The ability, under normal conditions, to retain the shade of colour and not to bleach excessively

Combination lacquers

Compared to pure nitrocellulose paints, nitrocellulose alkyd resin combinations are characterised by higher filling power, good gloss and high weather resistance. Although they have lost much of their importance, combi-lacquers are still used because of their rapid drying. Polishing is not necessary due to the high initial gloss, but is possible.

Complementary colours

Two colours directly opposite each other on the colour circle

Compound

Adhesion of the individual layers of a paint structure to each other. The bond is improved by adhesionpromoting additives and easy dissolving of the previous layer. Sanding promotes bonding. Very hard old paintwork, non-dry base materials and moisture have a reducing effect.

Consistency

Thickness or spreadability of a paint e.g. pasty, fließend or thixotropic

CO solvent

An approx. 10 % solvent content in the water-based lacquer, which is required for film formation

Consumption

The quantity of coating material required to apply a coating of a certain dry film thickness to a given area size under given conditions. The consumption is given in I/m² or kg/m² together with the corresponding dry film thickness in µm.

A distinction must be made between theoretical and practical consumption.

containers

Sealable container in which coating materials are transported and sold (can, canister, bucket, cartridge, Habbock, etc.). Package sizes and quantities are per container.

Contrasting colours

Colours separated by at least three others on the colour circle

Reason for inspection

Contrast agent which is sprayed onto a surface to be ground in order to highlight irregularities, thereby facilitating the grinding of the surface

Cooker/cooker bubbles