

GENERAL GLOSSARY OF RAW MATERIALS

A

Acaroid resin

Other names for this product from Australia and Tasmania are Botany Bay gum, grass-tree gum, nut resin, and earth shellac. Acaroid resin is a natural ester resin from the tree trunks of some species of *Xantorrhoea* (Liliaceae). Acaroid is completely soluble in alcohol, and partly soluble in chloroform and ether. Use: In dark and colored varnishes, sealing wax, and metal coatings, for glazing coffee beans, etc.

Acetic acid

A clear, colorless, pungent-smelling liquid for pH adjustment. When concentrated it is highly caustic.

Alcohol

Obtained from the fermentation of starch crops, followed by distillation. Partly chemically denatured!

Alder buckthorn bark

Used in vegetable dyeing, when intense red-brown to tan shades are desired. The alder buckthorn is native to Europe, northwest Asia and North Africa.

Aliphatic hydrocarbons

Solvents that are obtained by fractionation and distillation from petroleum and aromatics. A relatively mild solvent as compared to terpenes.

Alkanet

A dye plant from southern Europe, also called ox-tongue. It imparts reddish brown hues that depend on the preparation.

Alum

A white, crystalline powder that is used as a pickling medium in vegetable dyeing or leather tanning.

Aluminum oxide

A white powder from the mineral bauxite (aluminum and oxygen). It is used for the production of wall varnishes.

Aluminum silicate

A mineral filler with pigment properties. Hydrated aluminum oxide that formed through the weathering of aluminum-rich rocks. Origin: Northern Europe.

Amber

Succinite or gedanite is the solidified resin of coniferous trees from the Tertiary Period (Oligocene epoch). Amber is not a highly specific mineralogical term, but rather includes a number of different Tertiary resins, which are very different in composition and color. When used in varnishes, amber is often combined with copal. When further mixed with oiticica oil, very bright and hard varnishes result. Varnishes can also be manufactured by being boiled with linseed oil.

Arven oil (Swiss pine oil)

An essential oil from the Swiss pine, that is obtained from fresh needles and twigs. Origin: High mountain regions in central Europe.

B

Beech wood cellulose

An organic fiber filler that is manufactured from beechwood without using chlorine bleach. Imparts mechanical stability and a wood-like capacity for resorption to wall paints and plasters.

Beechwood tar oil

A dark, thick oil that is obtained by dry distillation of beechwood. Origin: Germany.

Beeswax soap

An aqueous solution of beeswax boiled with alkali.

Beeswax

A metabolic product of worker bees, which they use to build honeycomb. Beeswax is produced all around the world.

Bentonite (expansive)

A natural sheet silicate (phyllosilicate) that forms by the weathering of volcanic tuff. Used as an additive to adjust viscosity. It is approved as a pharmaceutical preservative, e.g. in eye drops, and is effective against many microorganisms that are responsible for rapid spoilage in aqueous solutions.

Bentonite

A naturally occurring clay mineral that is used as a gelling and thixotropic agent for varnishes and printing inks, waxes, fillers, and adhesives. It is also used in cosmetic products.

Benzalkonium chloride

Approved as a pharmaceutical preservative, e.g. in eye drops. Effective against many microorganisms that are responsible for rapid spoilage in aqueous solutions.

Benzoin resin

A Javanese incense, a fragrant resin that smells like vanilla. It is a binder ingredient for paints and artists' colors.

Benzoin

Gum benzoin, from the botanical family Styracaceae, is distinguished depending on its origin: Siam, Sumatra, Palembang and Penang. Siam benzoin is of the highest quality, and is almost exclusively used medically. For paints and varnish, mostly Sumatra benzoin is used. Benzoin is used mainly in gloss varnishes – "Petersburg furniture varnish".

Bergamot oil

Essential oil from the bergamot fruit, which belongs to the family of citrus fruits. Origin: Southern Europe.

Birch leaves

Used for dyeing textiles. The yellow dye can be modified with pickling to olive green.

Borax

A natural mineral from certain salt lakes of North America. A traditional mild alkaline for the extraction of casein.

Boric acid

An acid that occurs naturally in spring waters. It is used similarly to borax.

Boric salt

A natural mineral. A well-known preservative and preventive wood protecting agent.

C**Calcium octoate dryer**

See "Driers"

Candellila wax

Produced in Mexico from the crushed, fleshy leaves of a thornless spurge (*Euphorbia cerifera*) by boiling with dilute sulfuric acid.

Carbon black

A black pigment, carbon, obtained by means of thermal processes.

Carnauba wax

This plant wax is obtained from the leaves of the carnauba palm, which grows wild in northeastern Brazil, but is also cultivated.

Casein

A protein constituent of milk, which is separated by lactic fermentation (curdling). Casein is used in adhesives and emulsion paints.

Casein

As the main component of milk proteins, casein is predominantly obtained from milk, but also from peanuts and soybeans.

Castor oil

Made from the variegated seeds of the castor oil plant, which is also known as Palm of Christ. It has a pale yellow appearance, delivers high light resistance, and has good adhesion. It also serves as a softener, and causes only a little yellowing.

Castor stand oil

A high viscosity, dehydrated castor oil.

Catechu

An extract from the heartwood of Java acacia, which is numbered among the mimosa plants. Catechu is used as a mordant dye for brown textile colors, and is used together with other mordant dyes for dyeing leather.

Cedar wood oil

An essential oil obtained from various species of cedar. This oil is used as a fragrance in many soaps and cleaners, and also as an ingredient in insect repellents.

Cedarwood oil

Cedarwood oil is not derived from cedar, but rather from North American juniper.

Cellulose

See "Polysaccharide"

Ceramimbi wax

A grass wax from South America. Its melting point is above 90 °C, and is thus slightly higher than that of carnauba wax.

Ceresin (Cera mineralis alba)

This solid residue forms from Ozocerites during the evaporation of paraffin-rich mineral oils. White to yellowish, oil-soluble. Melting point 68-72 °C. Used in furniture polishes.

Chalk

Calcium carbonate, which is mined in Germany. It is a filler for latex paints and wall putty.

Chlorophyll

A natural green pigment in leaves. It is obtained by extraction.

Chrome green

A mineral pigment, in which the chromium is present in an insoluble (and therefore non-toxic) form. Not to be confused with chromates.

Cinnamon oil

Obtained from waste bark from Ceylon cinnamon trees.

Citral

An essential oil that is obtained from lemongrass. Source countries are in Central and South America, Africa and East Asia.

Citric acid

Colorless, water-soluble crystals with a sour lemon taste. Has a mild astringent and bleaching effect, and dissolves calcium carbonate.

Citron oil

An essential oil from citron peel (*Citrus medica*).

Citrus peel oil

Solvents that are obtained from the peels of various citrus fruits. The peels are cold-pressed, and the oil is separated by distillation from water and other impurities (e.g. pesticides).

Cobalt blue / cobalt green

Spinel pigments, in which the cobalt is present in an insoluble (and therefore non-toxic) form.

Cobalt octoate driers

See "Driers"

Cochineal dye (carmine)

A dye produced from the cochineal, a scale insect that lives on the cochineal nopal cactus (prickly pear) in Central and South America, and in the Canary Islands. The raw material, which imparts a color ranging from red to purple and gray, is also used in the food industry.

Coconut oil

A white to slightly yellowish oil, with a soft texture similar to shortening. Used to produce soaps, ointments and massage oils.

Colza oil

Colza oil is very similar to rapeseed oil, and has a pale yellow to brownish yellow appearance. It is obtained from crushed seeds, and used in leather care products and insect repellents.

Copaiba balm

A balm obtained by means of resin flow from various species of *Copaifera*. Origin: Various countries in the northern part of South America, and Trinidad.

Copal resin

There are amber-like fossil copal resins originating from East Africa. Southeast Asian copals by contrast did not arise until the present day. They dissolve in alcohol, and complement the properties of shellac. See also "Copals".

Copals

Copalli (Indian or Mexican), also known as copal incense. Copals are semi-fossil resins, nearly all of which are from tree-shaped *Caesalpiniaceae*, a group of plants that is related to the pea family. Copals are found under layers of sand on tropical coastlines, as the hard-wearing residue of trees which have otherwise long since rotted. Distinctions are made according to the location in which it is found, or the area of origin. The most important varieties are Congo copal or Manila copal. Not all copals are soluble in oil, unless they are soluble in spirit varnish. For dissolution in oil, copal is melted. See also "Copal resin".

Corn oil

A byproduct of corn starch production that is used in soaps and leather care products.

D**Dammar gum**

A pale yellow, transparent resin from the Southeast Asian dammar tree (*Shorea*), which is used in latex paints and adhesives. It is characterized by low degree of yellowing and high elasticity.

Dehydrated castor oil

Obtained from the seeds of the castor oil plant. Produced by dehydration of castor oil. Origin: Europe, South America.

Desiccants

Added as driers to oil-based paints, in order to reduce drying times. In natural products only lead-free desiccants such as zirconium octoate, calcium octoate, or cobalt octoate are used, and they are kept to a minimum. See also "Driers".

Dessicants

Soluble metal soaps such as cobalt octoate and zirconium octoate, which shorten the drying time of linseed oil-based varnishes and paints. The concentration is low.

Diatomaceous earth (diatomite)

Sediment from the silica skeleton of dead algae. Consists almost entirely of amorphous quartz. Used as a matting agent. Origin: Europe, USA.

Diatomaceous earth

Obtained from deposits of fossil diatoms, and ground into a powder that is used as a filler and suspending agent.

Dolomite

A crystalline filler with high whiteness. It is mined from deposits in Hammerfall, and is used in latex paints and anti-rust paints due to its high mechanical strength.

Driers

Also known as dessicants. They are catalysts that speed up the drying of natural resins and oils. They are organometallic compounds, which in natural paints are mostly in the form of octoate, whose material content results in the catalytic action. Compounds of barium, cobalt, calcium, zinc and zirconium can be used. See also "Dessicants".

Dyer's Broom

A semi-tall shrub that is native to England, and to central and southern Europe. Its flowers, leaves and thin branches are used in vegetable dyeing. The yellow dye is suitable for all natural fabrics.

Dyer's mulberry tree

Used in vegetable dyeing, when golden yellow to brownish tones are desired. The heartwood is used.

E**Earth and mineral pigments**

Earth colors (such as ocher, English red, Persian red, umber, brown oxide, earth black, chalk, gypsum, and talc) and mineral pigments (such as ultramarine, chromium oxide, and iron oxide) are used as colorants in stains, varnishes and paints.

Elemi

The name for a group of soft plant resins from Asia, Africa and America. Elemi is derived from the tropical plant family Burseraceae. The most commonly used elemi resin is the ointment-soft Manila elemi, which is gathered from injured trees (*Canarium luzonicum*). A greenish yellow, cloudy mass. Has a fennel-like odor, and is soluble in hot alcohol, ether, chloroform, benzene and carbon disulfide. Natural elemi is used as a soft resin, but becomes brittle with increasing age.

Essential oils

Obtained from lemon balm, rosemary, juniper, or St. John's wort. Used for their antifungal effect, and to protect against insect infestation.

Ethanol

Commonly known as alcohol. The precise chemical name is ethyl alcohol. Produced by alcoholic fermentation of sugar, or conversion of starch.

Eucalyptus oil

The essential oil from many different eucalyptus species that are mainly processed in Australia. This oil is also used in insect repellents.

Eucalyptus terpenes

A low odor distillate for dissolving resins and waxes. Concerning its manufacture, see "Citrus peel oil".

Expansive clay

A natural sheet silicate mineral (phyllosilicate) with a pronounced capacity for swelling. Used as a thixotropic agent for water-based and (surface treated) resin oil products.

F**Fatty acid esters**

Fatty acids with an emulsifying property, which are formed by combining a fatty acid with an alcohol.

Feldspar

A hard mineral filler with pigment properties, which is obtained by degradation.

Flax fibers

Used in plasters for reinforcement. A bast textile fiber that is obtained from one-year old, 1m high, blue-flowered flax.

Formic acid

A clear, colorless, corrosive liquid with a pungent odor. It is used in small amounts as a lime-dissolving additive.

G**Galganal root extract**

Aqueous extract from the Galangae rhizome. Origin: Paraguay.

Galls

Hollow structures and tissue growths in plants that are caused by gall midges, gall wasps or fungi. They contain tannins that are used in dyeing.

Glycerol ester of wood rosin

The natural resin colophony is modified in a boiling process using the fat byproduct glycerol (glycerin). The result is a resin with excellent weather resistance and elasticity.

Glycerol

Also known as glycerin. A natural component of vegetable and animal fats, e.g. of olive oil and coconut fat, which is obtained by saponification. Glycerol is an emulsifier.

Goldenrod

Yields yellow to yellow-brown pigments. Dried stems, leaves and yellow flowers from the 1m tall solidago plant are used in vegetable dyeing.

Guaiac wood extract

An aqueous extract from the wood of *Bulnesia sarmienti*. Origin: Paraguay.

Gum arabic

Also called gum acacia. Dried mucilage from different species of acacia. The gum is odorless and colorless to brown. When dissolved in warm water, it forms a tough and sticky liquid that is used in adhesives and as a thickener.

Gum turpentine

A distillate from pine resin balm that is obtained by scoring trees. Most often purified by distillation.

Gypsum

Natural calcium sulfate (earth pigment). Serves as a white colorant.

H**Hydrated lime**

Also called calcium hydroxide. Used as a component of the tile adhesive, and of the polishing technology system.

Hydrosulfite

Also known as dithionite. Used in vat dyeing.

I**Indigo**

Obtained from *Indigofera tinctoria* by fermentative extraction of the fresh plant. Yields different shades of blue from vat dyeing in an alkaline reducing vat.

Iron chloride

A chemical reagent that is used as an oxidant and mordant dye in textile printing and textile dyeing.

Iron oxide pigments

When iron rusts, it does so in different oxidation states. Each has its own specific color. The oxidation process can be technically controlled so that the targeted formation of specific pigments can be achieved. They are used for coloring and as UV protection.

Iron sulfate

Occurs as a mineral in the form of green or white crusts near Goslar. It can also be manufactured by dissolving iron in sulfuric acid. This raw material is used in vegetable dyeing and tanning.

Isoaliphates

Solvents that are necessary for an optimally workable consistency. Isoaliphates have only a slight acute toxicity and are free from carcinogenic or mutagenic effects. Because they are well tolerated by humans, they are also used in medicines and cosmetics.

J

Japan wax

A white or yellowish pure vegetable fat from the fruit of a tree-shaped sumac plant, which is obtained by boiling. It protects surfaces against drying, and is used impregnating agents and artist's waxes.

Jojoba oil

Oils from the olive-like fruit of the evergreen jojoba (*Simmondsia chinensis*), which grows wild in arid regions of California, Mexico and Arizona. Jojoba oil is extraordinarily skin friendly.

Juniper berry oil

The ripe fruits of the juniper (*Juniperus communis*) contain on average 1% of essential oil.

Juniper extract

An acetic acid extract from the branches of *lignum Juniperi communis*. Origin: Italy

K

Kaolin

A natural clay (e.g., porcelain clay). Used as a filler.

Kermes

Also called "false cochineal". A pigment used in vegetable dyeing. It is made from dried, female scale insects from the Mediterranean region that live mainly on evergreen oaks such as *Quercus ilex* (holly oak).

Kesu flower

Used in cloth dyeing and in wall varnish colors, for nuanced orange color shades.

L

Lanolin

Lanolin (*adepts lanae*, wool fat, *Lanolinum*). Fresh sheep's wool contains for example from 7 to 14.5% lanolin. The lanolin is boiled and forms a greasy, foul-smelling, yellowish-brown mass. In practice lanolin is of little importance for coating products for the treatment of wood.

Larch oil

An essential oil from the larch, which is extracted by drilling into the trunks. It is colorless, has a terpene-like odor, and is used as a fragrance.

Larch resin balm

A balm that forms by resin flow after larches are injured. Origin: Central Europe

Larch resin

Also called Venetian turpentine. Imparts softness, brightness and a silky shine to lacquers.

Laurel oil

An essential oil that is obtained from laurel leaves. It is effective in horse care products.

Lavender oil

Essential oil of true lavender (*Lavandula officinalis*). Obtained from the leaves and flowers. Origin: Southern France

Lime potash

A solution of potassium hydroxide in water, which is used in soap making with natural fats.

Lime rosin

Made from molten colophony resin (rosin), in which the natural acidity is neutralized by the targeted addition of lime.

Lime spar

Naturally occurring form of calcium carbonate (such as chalk). Used as a filler in paints and adhesives.

Linseed oil fatty acid

A natural fatty acid that is obtained from linseed oil by the separation of glycerol. Helps to wet earth pigments. See also "Glycerol".

Linseed oil potassium soap

Made from pure linseed oil by saponification with potassium hydroxide or potassium carbonate. Readily soluble in water, and a nourishing cleanser.

Linseed oil

Pressed hot or cold from flax seeds (linseed). With hot pressing, the yield is higher, but the quality is lower (considerably darker than cold pressed oil). Origin: Europe, USA, South America

Linseed stand oil / wood stand oil

Produced by heating linseed or wood oil. Wood oil is obtained from the walnut-like seeds of the tung oil tree. Linseed oil is cold pressed from flax seeds.

Linseed stand oil ester

By heating to 260 °C and adding natural resins, linseed stand oil is converted into a binder for varnishes, glazes and oil paints.

Linseed stand oil

Prepared by heating linseed oil, which yields increased heat resistance, improved weather resistance and reduced water-swellability of oils and paints.

Liquid soap

A saponification of coconut oil and soybean oil fatty acid with lime potash.

Lithopone

A mineral pigment mixture of zinc sulfide and barite.

Logwood

The heartwood of a tree that is cultivated in plantations (for example in Mexico), and is used for dyeing natural fabrics and leather. The dye shades are in the blue, purple and black ranges.

M**Madder**

Used in textile dyeing and in wall varnishes. The root of this plant yields nuanced red to brown color shades. It grows in Germany, Turkey and Central Europe.

Marble powder

A calcium carbonate that is used in "hard" products such as tile adhesives and polishing technology systems.

Mastic

A resin that is obtained by scoring small evergreen shrubs (*Pistacia lentiscus*) in the Mediterranean region (Cyprus, Chios, Palestine and Portugal). Used in artists' colors and photoresists.

Melissa oil (lemon balm oil)

An essential oil from the leaves of the lemon balm, which is native to the Near East. It is used as a fragrance in cosmetics and detergents.

Methylcelluloses

Water-soluble thickeners for paints and adhesives. Made from wood and wood waste.

Methylhydroxyethylcellulose

A cellulose that has been etherified with organic acids. Acts as a thickener and stabilizer. Improves workability.

Mica

Consists of various minerals and salts of silica. It has a lamellar/tabular structure, with a sheen ranging from light to dark. As micaceous iron oxide, it acts as a sunscreen.

Microcrystalline wax

A crystalline product made from petrolatum.

Mignonette (reseda)

A dye plant that is also known as dyer's weed. The whole plant is used in dyeing natural fabrics and leather, and yields yellow to olive shades.

Milk casein

Pure, flocculated milk protein. A binder for natural resin emulsions.

Milori blue

Also known as Berlin blue and Prussian blue. A mineral pigment.

N

Natural asphalt

This material derives from organic deposition, and comes exclusively from an area of western Colorado and Utah in the United States. It is free from aromatic and polycyclic compounds.

Natural latex milk

A natural, milky emulsion that is obtained by tapping rubber trees. Origin: Malaysia.

Neem bark extract

An acetic acid extract from the bark of the neem tree (*Antelaea azadirachta*). Used as a natural insecticide. Origin: India.

Nickel titanium yellow

A mineral pigment that is industrially produced.

Nut oil

Also called walnut oil (*Oleum jugland*). A fatty oil from walnut kernels (*Juglans regia*). A pale yellow, sweet-smelling liquid. Nut oil is cold pressed from the flesh of well-ripened walnuts. Mainly used as an edible oil. Also used as a binder for lacquers and paints.

O

Oak bark

The dried bark of young trunks and branches of deciduous oaks (common oak) and evergreen oaks (holly oak). It is used in tanning and vegetable dyeing. Origin: Germany.

Oiticica oil

A fatty drying oil that is pressed from the fruit of the tree-shaped, up to 20 m high South American *Licaniarigida*. Used as substitute for wood oil. The freshly pressed oil solidifies easily into yellowish masses. Oxidation in air results in a brownish discoloration. It is therefore not suitable for use in colorless, light-fast or white colors.

Orange peel oil

Cold pressed from fruit peel and purified by means of gentle distillation in a vacuum. It is only used in the food-grade form.

Oregano extract

An acetic acid extract from the leaves of *Oreganum creticum*. Origin: Italy, Spain.

Ozocerite

A natural petroleum solid.

P

Paliogen red

A synthetically produced, organic perylene pigment.

Paraffin wax

Long-chain saturated aliphatic hydrocarbons, resulting from the distillation of petroleum. Widely used, including in pharmaceuticals and cosmetics. Natural beeswax also contains up to 10% paraffin wax.

Perilla oil

A drying, yellowish, fatty oil that is obtained from the seeds of *Perilla ocemides*, which belongs to the labiate family of plants. Used as a substitute for linseed oil.

Peru balm

A balm obtained by resin flow from the *Hyroxylon pereirea* plant. Origin: Coastal region of El Salvador.

Petroleum ether

Also known as benzinum medicinale (not to be confused with benzene or benzyne). A highly purified mixture of alkanes that is also used for disinfection and cleaning of wounds. Nevertheless, it is a solvent that evaporates from the treated surface, and to the extent possible should not be inhaled.

Pine needle oil

Distilled from pine needles and young shoots, and used in wood treatments, floor waxes and shoe creams.

Pine oil

An essential oil from various species of spruce.

Pine resin

A heavily scented resin secretion of black pine.

Pine terpene alcohol

A fraction from the distillation of pine balm turpentine oil.

Polysaccharide (cellulose, starch)

A naturally produced carbohydrate that consists of many individual sugar molecules. Used as an additive to stabilize viscosity and emulsion.

Poppyseed oil

Oleum papaveris. A pale yellow to straw yellow, clear, pleasant-tasting, low odor oil that is cold pressed from the seeds of the poppy plant. Used for bright artist's colors.

Potash

A white, hygroscopic powder. Chemical name: potassium carbonate. A mild alkali that is used for the saponification of vegetable waxes, resins and oils.

Potato starch

A carbohydrate product from the potato. Origin: Central Europe.

Propolis

A resinous mixture, which bees use as a sealant. A special tree resin that protects the young buds of poplar, birch and alder trees against pests. Collected by bees and used as a disinfectant for sealing beehives. Origin: Europe.

Q

Quartz sand

Silicon dioxide. A natural building material of a specified grain size. Consists predominantly of pure quartz. Origin: Germany.

R

Rapeseed oil

Also known as rapa oil, rappi oil, rapa seed oil, and oleum Raparum. A fatty, pale yellow to brownish yellow, non-drying oil that is first cold-pressed and then warm-pressed from *Brassica napus* seeds. Used as a diluent in some coating materials.

Rhubarb root

Has a high content of tanning agent glycosides, and is used in finishing leather.

Rosemary oil

An essential oil from rosemary leaves (*Rosmarinus officinalis*). Origin: Spain.

Rosin (colophony)

Rosin is derived from the balm of various species of pine. The balm that results from injury to the bark is separated by distillation into rosin and balm turpentine. Rosin is used in two forms:

1. Boiled with glycerol to form an ester.
2. Cured with lime.

Both are used as binders in paints, lacquers and varnishes. Origin: Southern France, Portugal

Rosin (colophony)

The distillation of pine resin produces turpentine on the one hand, and rosin on the other. The extremely sticky resin is very rarely used in its pure form.

S

Safflower (thistle) oil

Pressed from safflower seeds, the oil is then thickened and used as a non-yellowing binder.

Safflower oil

Oil from the safflower, which is also known as dyer's thistle or dyer's saffron. Origin: Europe, India, Iran, North Africa. It is a light, non-yellowing oil for white paints and impregnation oils.

Safflower stand oil

A dry oil made from the fatty seed oil of the safflower thistle. It is used as a non-yellowing binder. Origin: Europe, USA, South America.

Sage extract

An acetic acid extract from the leaves of *Salviae officinalis*. Origin: Spain, Dalmatia.

Sandarac

Obtained from the bark of a small tree that grows in North Africa (*Tetraclinis articulata*, from the Cypress family). Sandarac is used in blackboard paints and sealants. It is soluble in alcohol, ether, chloroform, and essential oils.

Shellac wax

Precipitates out when crude shellac is treated with alcohol. Due to its hardness, it is used in floor waxes and leather care products.

Shellac

A resin secreted by the Asian lac insect. It is used in enamels, varnishes and polishes.

Sico Bordorot

A synthetically produced, organic monoazo pigment.

Sienna

An earth pigment whose coloring components consist of iron oxide and manganese oxide. It is obtained by elutriation and grinding. Origin: Northern Italy.

Silica

The hydrated form of silica, which occurs as sand or quartz. Added as a matting agent in varnishes and lacquers.

Sodium hydroxide

The chemical name for caustic soda

Soy lecithin

A soybean constituent, which is extracted for example with alcohol. A good natural wetting agent and emulsifier. It is frequently used in the food industry.

Soy/linseed stand oil

Produced by heating soybean oil and linseed oil. Used in varnishes, oil paints and printing inks.

Soybean oil

Also called soy oil. A light yellow oil that is pressed from the fruit of *Soja hispida* (from the pea family). In paint manufacturing, it is used in a mixture with linseed oil.

Stock lac

A red, water-soluble, fine powder. A byproduct from the manufacture of shellac.

Sugar surfactant

An effective detergent, made from sugar-containing raw materials by chemical reaction with vegetable oils, in a reaction involving potash.

Sunflower oil

A pale yellow fatty oil from sunflower seeds. Due to the high content of unsaturated linoleic acid, it is used in varnishes, paints and soaps.

Sunscreens

Prevent the yellowing of coating materials or coated surfaces.

Suspending agents

Prevent the settling of pigments.

Swiss pine oil

See "Arven oil".

Synouric stand oil

Made from castor oil. Has properties similar to wood oil. See "Wood oil".

T

Talc

A hydrated silicate of magnesium (magnesium silicate), which occurs as talc or soapstone in the form of a finely flaked mass with a waxy sheen. Origin: Central Europe.

Tall oil

The word comes from the Swedish – tallolja = spruce oil. Tall oil is a byproduct of pulp production and is a blackish, slimy, foul-smelling mass. Purified tall oils are used in varnishes and paints. By itself it is too brittle; it must be mixed with other oils.

Thistle oil

Also called safflower oil. A fatty oil from safflower seeds (*Carthamus tinctorius*). Often used in the paint and varnish industry.

Thyme oil

An essential oil obtained from the dried leaves and flowers of the thyme plant. Origin: Spain.

Titanium dioxide

A white pigment with the highest whitening and hiding power. It is used in paints and varnishes, but also in cosmetics.

Tragacanth

Also known as gum tragacanth. Obtained by scoring the stem bark of wild-growing, shrubby species of *Astragalus* (*Astragalus verus*, *A. cretius*, *A. gummifer*, from the pea family). A juice emerges, which solidifies within about 3 days to a white, yellowish mass. Harvesting is then done in June, and the gum is handled in linear or worm-shaped pieces that are 1-3 mm thick and about 5 mm long. The pieces have the hardness of horn, and can only be dissolved in large amounts of water (50:1). It has diverse applications in foods, cosmetics and pharmaceuticals. For paints it is used as a binder in watercolors.

Train stand oil

Made from train oils by concentration. Train oils are pale yellow to brown, fishy-smelling fatty oils that are obtained by pressing or boiling from the fatty tissues of large marine animals (whales, walruses, seals, sharks, pot fish, dolphins). It is used like linseed stand oil in coating materials.

Trisodium phosphate

A sodium salt of ortho-phosphoric acid.

Turkish red

In the production of this additive, castor oil is treated with sulfuric acid.

U

Ultramarine

Inorganic pigments whose composition is based on sulfur sodium aluminum silicates.

Umber

An earth pigment whose coloring components consist of iron oxide and manganese oxide. It is obtained by elutriation and grinding. Origin: Cyprus, Northern Italy, Germany.

V

Vinyl acetate-ethylene copolymer

A synthetic resin powder that is added to the tile adhesive in small amounts, to give it the necessary elasticity and good processing characteristics. A food legislation approved substance.

W

Walnut oil

A pale yellow, pleasant-smelling oil from the kernels of walnuts. It is used in impregnation oils and varnishes.

Walnut shells

Impart a brown color for textile dyeing. Cultivation in plantations is common in all continents.

Water

Used in many solvent-free products. Water is a safe substitute for all solvents. Deionized water: Fully demineralized water.

Wetting agents

Lower the surface tension of liquids. For example they are used to promote the binding of oils and pigments (soy lecithin can be used here).

Wheat flour

A pure grain flour. Used as a matting agent.

Wintergreen oil

An essential oil that is obtained through steam distillation from the leaves of the wintergreen plant, which is native to the northern and eastern United States, and to Canada. It repels insects.

Wood oil

A dry oil that is obtained from pressing tung tree seeds. In paints, it is used predominantly as stand oil, which is obtained by heating wood oil in the absence of air. Origin: China and South America.

Wood stand oil

Wood oil is boiled in the absence of air. This yields wood stand oil, an effective drying binder. See also "Wood oil".

Wood vinegar

Obtained by dry distillation of wood. The aqueous distillate is purified by repeated distillation.

X**Xanthan gum**

A polysaccharide thickener and stabilizer for emulsions in paints and cosmetics.

Y**Yellow chamomile**

Yields a pure yellow to golden yellow dye for wool.

Z**Zeolite**

An aluminosilicate mineral that is produced by precipitation from alum and sodium silicate. A particularly environmentally sound mineral as a phosphate substitute for quenching.

Zinc octoate driers

See "Driers".

Zinc oxide

A white, loose powder that has moderate hiding power when used as a pigment in paints, varnishes and fillers.

Zirconium/cobalt soaps

See "Driers".