BRITISH STANDARD

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Glossary of

Paint and related terms

Committees responsible for this British Standard

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British Colour Makers' Association
British Decorators' Association
British Resin Manufacturers' Association
Department of the Environment (Building Research Establishment)
Institute of Metal Finishing
Oil and Colour Chemists' Association
Paint Research Association
Paintmakers' Association of Great Britain Ltd.
Society of Dyers and Colourists

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Contents

Foreword

This British Standard has been prepared under the direction of the Pigments, Paints and Varnishes Standards Policy Committee. It supersedes BS 2015:1965, which is withdrawn.

This British Standard defines terms specific to, and in general use in, the paint and allied industries.

The previous edition was an alphabetical list of terms but this revision has divided the terms into sections related to specific areas. Terms which may commonly be used in the paint industry in the ordinary dictionary sense have been omitted except for materials used in the manufacture of paints; these are included in section 2.

The approach of the glossary is to define terms in the general sense, avoiding detailed technical descriptions but remaining accurate and informative.

Some terms exist which may have specific meanings in particular sections of the paint and allied industries but which are defined in a general sense in this glossary. The aim is for the glossary to be of use to as wide a cross section of the industry as possible; where a more specific meaning is known to be recognized by a particular interest, an endeavour has been made to draw attention to this as part of the definition.

Each entry has an individual number consisting of four digits in two parts; the first two digits represent the number of the section and subsection, and the second two digits represent the place that the term occupies within the section or subsection. Where two or more terms have the same meaning, preferred terms are printed in bold type; and deprecated terms are given below the preferred term, in medium type, with their status indicated. Terms of more than one word, e.g. “hammer finish”, are written in the direct style and not as “finish, hammer”. The inverted term is included in the index with reference to the direct term.

Terms are listed alphabetically in the index and are referred to by the numbers which are found against the terms in the body of the standard.

The method of alphabetization used in the index is word-by-word. The following filing sequence has been used for entries that begin with the same word:

a) a single word entry and its sub-headings;

b) the same word identified by same qualifier;

c) compound entries beginning with the same word.

Italicized words indicate terms that are defined elsewhere in this standard.

A confusing aspect of the terminology of this field is the use of the term “coating” in three senses: for the material applied, the action of applying the material, and the resulting film. In this glossary “coating” is used only for the action, “coat” is used for the resulting film and “coating material” for the material used.

In order to keep abreast of progress in the industries concerned, British Standards are subject to periodical review. Suggestions for new terms and improvements to existing definitions are welcomed by the committee responsible for the updating of this standard.

NOTE The titles of the publications referred to in this standard are listed on page 50.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 50, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 General and miscellaneous

No.	Term	Definition
10 **02**	**adhesion**	The degree of attachment between the *film* of a *coating material* and the *substrate* with which it is in contact. The latter may be another *film* (intercoat *adhesion*) or the *substrate* material. NOTE *Adhesion* should not be confused with *cohesion*.
10 **04**	**ageing**	The irreversible change, if any, in the properties of a *coating material*, that occurs with the passage of time. It is referred to, in particular, in connection with dry *films*.
10 **05**	**agglomerate**	A loose arrangement of *primary particles* and *aggregates* of a *pigment*, attached, for example, at their corners or edges, which may be broken down during *dispersion* in the paint-making process.
10 **06**	**aggregate**	An assemblage of particles rigidly joined together, as by partial fusion, i.e. sintering or cementation or by growing together, which is not usually broken down by the *dispersion* techniques used in the *paint* industry.
10 **07**	**alcoholysis**	The chemical reaction between an ester and an alcohol that results in the replacement of the alkyl group in the ester by that of the alcohol. NOTE This reaction is frequently employed in the manufacture of *alkyd resins*, in which a triglyceride oil is reacted with a polyhydric alcohol at a high temperature in the presence of a *catalyst* to form a mixture of partial esters (mono-and di-glycerides, etc.). These partial esters are, unlike the oils themselves, miscible with the dibasic acids used in alkyd manufacture and obviate the need for the generally more expensive fatty acids.
10 **08**	**apparent density**	Density in grams per litre of untamped powder.
10 **09**	**aqueous dispersion**	A *dispersion* in which the continuous phase is water with or without substances dissolved therein.
10 **10**	**auto-ignition temperature**	The temperature to which, under specified conditions, a substance has to be raised to initiate self-sustained combustion in the absence of any source of ignition. NOTE 1 *Auto-ignition temperature* is not an absolute property, it varies with the method used for its determination. NOTE 2 The *auto-ignition temperature* of a material has no direct relationship to its *flash point*.
10 **12**	**break mucilage**	Of oils. The separation of the mucilaginous product that occurs when certain unrefined vegetable oils are heated. This appears as a hazy suspension which may coagulate into a spawn-like mass. The separated material generally remains insoluble, and cannot be re-dissolved in the oil, even on prolonged heating. NOTE When separation occurs, the oil is said to "break". The insoluble matter is also referred to as the "break" or "mucilage".
10 **13**	**build**	The thickness, either real or apparent, of the dry *film* of a *coating material*.
10 **14**	**bulk density**	Density in grams per litre of tamped powder.
10 **15**	**bulking volume**	The volume per unit mass of tamped powder, usually expressed as litres per kilogram (l/kg).

No.	Term	Definition
10 **16**	**catalyst**	A substance that increases the rate of a chemical reaction, but that remains chemically unchanged at the end of the reaction. NOTE 1 The term is often loosely employed to cover those additives that enter into the reaction, as in the *curing* by chemical cross-linking of resins. NOTE 2 See also *accelerator, cross-linking agent, curing agent, hardener* and *initiator*.
10 **18**	**coating**	A process that leads to the deposition of a *coat*.
10 **21**	**cohesion**	The forces that bind together into a coherent whole the particles of a *film*. NOTE *Cohesion* should not be confused with *adhesion*.
10 **23**	**copolymer**	A *polymer* derived from more than one chemically different species of *monomer*. NOTE An example is butadiene-styrene.
10 **25**	**curing**	The process of condensation or *polymerization* of a material by heat or chemical means resulting in the full development of the desired properties.
10 **26**	**degree of polymerization**	The number of monomeric structural units in a given *polymer* molecule.
10 **27**	**depolymerization**	The reduction, by physical or chemical action, of the molecular complexity of polymeric materials. The process may yield the parent *monomer* and/or more simple *polymers*, or lead to the complete destruction of the substance.
10 **29**	**dispersibility**	The rate at which a *pigment*, during the milling process, achieves the requisite degree of *dispersion*.
10 **30**	**dispersion**	A two-phase system in which one phase, the disperse phase, is permanently distributed as small particles throughout the second phase, the continuous phase.
10 **31**	**elastomer**	A macromolecular material that, after substantial deformation by a weak stress at room temperature returns rapidly to its initial shape and dimensions when the stress is removed.
10 **32**	**emulsion**	Apparently homogeneous material formed by the incorporation of two liquids which are normally immiscible. One liquid is dispersed in the other in the form of minute drops. NOTE 1 If the droplets remain permanently dispersed, the *emulsion* is said to be stable. Certain compounds are added as *stabilizers* because of their power to keep the droplets dispersed. NOTE 2 With reference to *coating materials*, the term is often erroneously applied to stable emulsion-like *dispersions* of a solid organic *binder* in water, e.g. polyvinyl acetate *emulsion*.
10 **34**	**film formation**	The process by which *coating materials*, when applied to a *substrate*, are transformed into a cohesive layer.
10 **35**	**finish**	The final or only *coat* in a *coating-system*. NOTE See also subsection 42 for types and appearance of the *finish*.

No.	Term	Definition
10 **36**	**flammability limits**	The limits of concentration known as lower explosion limit (LEL) and upper explosion limit (UEL) expressed as percentages by volume in air; between these limits a gas or vapour is capable of being explosively ignited on contact with a source of ignition. CAUTION. It should not be assumed that mixtures below the LEL and above the UEL are not combustible.
10 **37**	**footing**	The gradual deposition of *foots* from a *drying oil* or *varnish*.
10 **38**	**foots**	The settled layer that collects at the bottom of the container, when a *drying oil* or *varnish* is allowed to stand.
10 **39**	**functionality**	A concept commonly used in the formulation of *alkyd resins* or *polyester resins* prepared by a polycondensation reaction, where the term refers to the number of reactive groups within a molecule. NOTE The most important groups in this context are carbonyl, carboxyl and hydroxyl, but others are the epoxy, urethane and vinyl groups.
10 **40**	**glass transition temperature** (T_g)	A temperature below the melting point of a *polymer* at which the temperature dependence of volume and other thermodynamic variables show a marked change of gradient. Above this temperature the *polymer* exhibits rubber-like properties; below this temperature the *polymer* becomes inelastic and brittle.
10 **41**	**homopolymer**	A *polymer*, the molecules of which consist of one kind of structural unit repeated any number of times. NOTE Examples are polyvinyl chloride or polyvinyl acetate.
10 **42**	**inhibitor**	A material used, in small proportions, to arrest or retard a chemical reaction.
10 **44**	**monomer**	The unit molecule from which a *polymer* is built up.
10 **46**	**particle size**	The size of a typical particle within a *pigment, extender, powder coating material* or *paint*, usually expressed as a linear dimension, e.g. in micrometres (μm), which may be related to a sieve aperture or the diameter of an equivalent spherical particle. NOTE *Particle size* data will have value only if qualified by reference to the specific method of measurement. Rarely, however, are particles similar enough in size for a single figure to be meaningful. The range of sizes that are encountered practically may be expressed in a variety of ways, e.g. the mass of particles retained on a range of sieves, the number of particles that fall in different size brackets or the volume of particles that settle out from a suspension under given conditions. The mean *particle size* can be calculated from any of these sets of results and clearly it is important to state the method of evaluation. (See also BS 2955.)
10 **47**	**particle size distribution**	The relative proportion of the various *particle sizes* occurring in a given sample.
10 **48**	**pigment binder ratio**	The ratio, expressed as mass/mass, of the total *pigment* (white and/or coloured *pigment* plus *extender*) to the *binder* in a *coating material*.
10 **50**	**polymer**	A substance, the molecules of which consist of one or more structural unit(s) repeated many times. NOTE The *polymers* most widely used in surface *coating materials* are produced either by addition *polymerization*, e.g. *vinyl resins*, or by condensation *polymerization* in which water or other substances are eliminated, e.g. *alkyd resins*.
10 **51**	**polymerization**	A chemical reaction leading to the formation of a *polymer*.

No.	Term	Definition
10 **52**	**prepolymer**	A *polymer* that is capable of further *polymerization* by reaction with itself or with other *polymers* or *monomers*.
10 **53**	**primary particles**	The individual particles of a *pigment* or an *extender* that may be largely combined in *aggregates* and/or *agglomerates*.
10 **54**	**saponification**	The formation of a soap by the reaction between a fatty acid ester and an alkali. NOTE In painting practice, *saponification* refers to the decomposition of the *medium* of a *film* by alkali and moisture in the *substrate*, e.g. new concrete or rendering based on cement, sand and lime. Saponified *films* may become sticky and discoloured. In very severe cases the *film* may be completely liquefied by *saponification*. (See also *unsaponifiable* matter.).
10 **56**	**specific surface** surface area *deprecated*	The surface area of the particles in a unit mass of powder as determined under stated conditions, e.g. from adsorption, permeability, particle size and size distribution. NOTE See BS 4359-1.
10 **57**	**spirit**	In the *paint* industry, this term is somewhat loosely used but generally refers to commercial ethyl alcohol normally sold as industrial methylated spirit. NOTE The term mineral spirits is used, particularly in America, for what is known in the UK as *white spirit*. This consists mainly of a mixture of aliphatic hydrocarbons with a proportion of aromatic hydrocarbons.
10 **58**	**spirit-soluble material**	A material, e.g. a resin or a *dye*, that dissolves readily in a liquid composed essentially of an alcohol, usually ethyl alcohol (industrial methylated spirit). NOTE The term does not imply solubility in *white spirit*.
10 **59**	**surface treatment**	Of a pigment. The modification of the surface of a *pigment* in order to improve particular properties, e.g. resistance to *yellowing; dispersibility* or *weathering*. The process may involve the deposition of small quantities of other materials on to the surface of the *pigment*.
10 **60**	**surfactant surface-active agent**	A substance that has the fundamental property of reducing the interfacial tension between a solid and a liquid, or a liquid and air.
10 **61**	**terpolymer**	A *polymer* derived from three chemically different species of *monomer*. NOTE An example is acrylonitrile-butadiene-styrene.
10 **62**	**thermal depolymerization**	Depolymerization effected by means of heat.
10 **63**	**thermoplastic**	A term applied to a macromolecular material capable of being reversibly softened by heating.
10 **64**	**thermosetting**	A term applied to a macromolecular material that under the influence of appropriate thermal conditions undergoes *polymerization* to yield a solid which is infusible and insoluble in commonly used *solvents*.
10 **66**	**unsaponifiable matter**	The fraction, usually expressed as a percentage, e.g. of a *binder*, that remains unaffected by alkalis under specified test conditions.

No.	Term	Definition
10 **69**	**viscosity** **apparent viscosity**	The internal resistance to flow possessed by a liquid, determined by measuring the force required to shear the liquid, i.e. to move one layer over another in orderly flow without turbulence at a defined rate. NOTE 1 Most *solvents*, and many oils and *varnishes* are what are termed Newtonian liquids, that is, when they are tested in suitable viscometers at a fixed temperature, their rate of flow (shear) is proportional to the shearing force. The *viscosity* of these liquids at a fixed temperature is thus a constant. NOTE 2 For most *paints* and other pigmented materials the rate of flow (shear) is not proportional to the shearing force, but may vary with the time and rate of shearing. For these materials only an *apparent viscosity*, a figure that refers only to the behaviour of the material under the particular circumstances and precise conditions of measurement, can be determined. (See BS 188; BS EN 535.)
10 **70**	**zeta potential**	The electric potential that develops at the interface between a solid and the liquid phase with which it is in contact.

2 Raw materials

21 Pigments

21 **01**	**aluminium paste**	A paste consisting of fine aluminium flakes in a volatile *medium*, usually *white spirit*.
21 **02**	**bronze paste**	A paste consisting of bronze coloured metallic flakes in a volatile *medium*, usually *white spirit*. NOTE It is used in combination with *media* to make *metallic* and *polychromatic paints*.
21 **03**	**dry colour**	A term used to describe any coloured *pigment*, including black but excluding white.
21 **05**	**earth colour** **mineral pigment**	A *pigment* of the class that is usually mined, subsequently dried, ground and sometimes calcined. NOTE Examples are red and yellow oxides of iron, raw and burnt sienna and umber.
21 **06**	**extended pigment** reduced pigment *deprecated*	A *paint* raw material consisting of a mixture of a *pigment* and an *extender*. NOTE Such materials, when commercially available, are identified by the respective proportions of the *pigment* and *extender*.
21 **08**	**flake white**	A variety of white lead in oil.
21 **09**	**Indian red**	A red oxide with a bluish undertone made by *grinding* a variety of haematite.
21 **10**	**inert pigment**	A *pigment* that remains relatively inactive or chemically unchanged in *paints* under specified conditions. NOTE The term has little significance unless the conditions are stated.
21 **11**	**inhibitive pigment**	A *pigment* that retards or prevents the corrosion of metals by chemical and/or electrochemical means, as opposed to performing a purely barrier function. NOTE Red lead and zinc chromate are examples of *inhibitive pigments* as opposed to red iron oxide which has little or no inhibitive action.
21 **12**	**lake colours**	A class of *pigments* consisting of organic colouring matter chemically or physically absorbed on an inorganic base or carrier, e.g. alumina. NOTE *Lake colours* are characterized by bright *colour* and pronounced translucency when made into a *coat*.

No.	Term	Definition
21 **13**	**lead chromes**	A group of *pigments*, consisting essentially of precipitated lead chromate, to which are added during manufacture other substances which modify the crystal structure in order to create a range of *colours* from primrose yellow to scarlet.
21 **14**	**organic pigment** pigment-dyestuff *deprecated*	A coloured *pigment,* insoluble in water but sometimes partially soluble in organic *solvents*, based on an organic compound sometimes with an inorganic component physically or chemically incorporated.
21 **16**	**pigment chip**	A concentrated *dispersion,* in chip form, of a *pigment* in a *polymer*. NOTE 1 Examples are cellulose nitrate, *vinyl resin*. NOTE 2 *Pigment chips*, unlike conventional powder *pigments*, offer the end-user a means of achieving a very fine *pigment dispersion* within a chosen *medium*, without needing to use *ball mills* or heavy-duty high-shear equipment such as *triple-roll-mills*.
21 **17**	**pigment paste**	A *dispersion* of a *pigment* in a continuous liquid phase.
21 **18**	**tinter**	A coloured *pigment* or *pigments* dispersed in a *medium* compatible with *paint vehicles*, added in relatively small proportions to already prepared *paints* to modify their *colour*. NOTE Stainer is an obsolescent term for *tinter*.
21 **19**	**titanium dioxide pigment**	One of a range of white *pigments,* widely used in *coating materials*, that are based on titanium dioxide in two crystalline forms: anatase and rutile. The two forms differ in their effects on *hiding power* and *weathering* resistance; these effects can be modified by treatment, e.g. with silica or alumina.
21 **20**	**toner**	An insoluble salt of an organic *dye*. NOTE The term is also loosely applied to pure *organic pigments* but this sense is deprecated.
21 **21**	**transparent iron oxide**	A red oxide *pigment* that colours a *coating material* with minimal effect on its transparency.
21 **22**	**universal tinter**	A multi-purpose *tinter* that can be used both with organic solvent-thinned *paints* and with water-thinned *paints*.
21 **23**	**zinc dust**	Finely divided zinc metal used as a *pigment* in protective *coating materials* for iron and steel.

22 Resins, intermediates and other media constituents

NOTE Definitions of other types of resin are given in BS 1755-1.

22 **01**	**acetal resin**	A *thermoplastic* resin derived from polyvinyl acetate in which ester groups have been replaced by hydroxyl groups and most of these hydroxyl groups converted to acetal groups by reaction with aldehyde.
22 **02**	**acrylic resin**	A *synthetic resin* made by the *polymerization* of an acrylic compound, e.g. methyl acrylate, methyl methacrylate. NOTE See also *vinyl resin*.

No.	Term	Definition
22 **03**	**alkyd resin**	A *synthetic resin* made by condensation between a polyhydric alcohol such as glycerol, and a polybasic acid such as phthalic acid (normally used in the form of the anhydride). NOTE Modifying agents may be incorporated to influence the properties of the resulting product. Thus, the inclusion of acids from a vegetable *drying oil* such as *linseed oil*, in place of some of the phthalic anhydride, gives a resin soluble in the organic *solvents* usually used in *paints* and *varnishes*. By varying the types and ratios of the polyhydric alcohols and carboxylic acids, an almost infinite number of different resins can be made, some of which may be used as the sole film-forming agents or as film-forming ingredients with materials such as *nitrocellulose*. (See also *long oil; short oil*.)
22 **04**	**amino resin**	A *synthetic resin* of the *thermosetting* type made by the reaction of urea, thiourea, melamine, or allied compounds usually with formaldehyde. NOTE *Amino resins* are blended with other resins (e.g. *alkyd resin* or *epoxy resin*) and are usually cured by *stoving*. *Amino resins* may also be cured by chemical means at normal air temperature, e.g. in wood finishes.
22 **05**	**bitumen**	A viscous liquid or a solid, consisting essentially of hydrocarbons and their derivatives which is soluble in aliphatic *solvents* and is substantially non-volatile and softens gradually when heated. NOTE Bitumen is black or brown in *colour* and possesses waterproofing and *adhesive* properties.
22 **06**	**blown oil**	A vegetable oil that has been partially oxidized by injecting a current of air whilst at an elevated temperature. The characteristics of the oil, such as its increased *viscosity* and degree of oxidation, can be controlled by the time, the temperature and the amount of air.
22 **07**	**bodied oil**	An oil of increased *viscosity* produced by any means. NOTE Examples are *blown oil, stand oil*.
22 **08**	**boiled oil**	*Linseed oil* which has been heated and to which *driers* have been added.
22 **09**	**butyral resin**	A resin derived from polyvinyl alcohol in which the hydroxyl groups have been reacted with butyraldehyde instead of acetaldehyde.
22 **10**	**cellulose acetate butyrate**	A *thermoplastic* material derived from a mixed acetic acid and butyric acid ester of cellulose.
22 **11**	**cellulose acetate propionate**	A *thermoplastic* material derived from a mixed acetic acid and propionic acid ester of cellulose.
22 **12**	**chlorinated rubber**	Natural or synthetic rubber that has been chlorinated to increase its solubility in organic *solvents*. NOTE *Coating materials* made from *chlorinated rubber* have a high degree of chemical and water resistance.
22 **13**	**copal**	The *natural resins* formed from the exudate of various tropical trees.
22 **14**	**dehydrated castor oil (abbrev. DCO)**	A *drying oil* prepared by the action of heat at about 280 °C on *castor oil* in the presence of acidic *catalysts* such as sodium bisulphite.
22 **15**	**dispersion resin**	A stabilized *dispersion* of a *polymer* in a liquid. NOTE The *dispersion* technique enables *coating materials* to be prepared with higher non-volatile contents at a particular *viscosity* than is possible with solutions of similar resins. The *coating materials* fall into three main groups, *plastisols, organosols* and *non-aqueous dispersions*.

No.	Term	Definition
22 **16**	**drying oil**	An oil, usually of vegetable origin, having the property of hardening by oxidation to a tough *film*, when exposed to air. NOTE The commonest examples are *linseed oil, soya bean oil*, safflower oil and *dehydrated castor oil*.
22 **17**	**epoxy resin**	A *synthetic resin* containing epoxide groups and in which the final *polymer* is formed as a result of a reaction taking place substantially at the epoxide groups.
22 **18**	**hydrocarbon resin (1)**	A *synthetic resin* derived from the reaction between hydrocarbons and aldehydes. The hydrocarbon may be aromatic such as naphthalene, benzene or one of its homologues, or a terpene.
22 **19**	**hydrocarbon resin (2)**	A resin formed by the *polymerization* of coumarone and/or indene in the presence of *catalysts*.
22 **20**	**isocyanates**	A class of organic compounds, embodying the –NCO group that react with polyesters and polyethers to form *polyurethane resins*.
22 **21**	**isomerized rubber cyclized rubber**	A resin, soluble in *white spirit* or other organic *solvents*, produced from natural rubber by heating with an acid *catalyst*.
22 **22**	**ketone resin (1)**	A *synthetic resin* obtained by the auto-condensation of cyclic ketones such as cyclohexanone, methyl cyclohexanone and cyclopropanone.
22 **23**	**ketone resin (2)**	A *synthetic resin* formed by the condensation of a ketone with an aldehyde.
22 **24**	**lac**	A resinous substance excreted by COCCUS LACCA insects on certain trees in tropical rainforests.
22 **25**	**latex**	Originally a natural rubber latex; now also applied to dispersions of various *synthetic resins*.
22 **26**	**linseed oil**	The *drying oil* obtained from the seeds of the flax plant LINUM USITATISSIMUM. NOTE The crude product is known as raw *linseed oil* and before usage in surface *coating materials* it undergoes various treatments either by acid or alkali to yield refined *linseed oil*.
22 **27**	**long oil**	A high ratio of oil to resin in a *medium*, i.e. high *oil length*.
22 **28**	**maleic resin**	A polycondensation product from maleic acid, or more usually maleic anhydride, *rosin* and polyhydric alcohols, such as glycerol or pentaerythritol.
22 **29**	**natural resin**	A glassy amorphous organic substance produced either in the metabolism of tree growth, e.g. *copal*, or by insects, e.g. *lac*. NOTE The former may be obtained from growing trees or dug up from the ground (fossil resin) where it has lain since the trees from which it was formed decayed in prehistoric times. These resins, as distinct from gums, are not soluble in water but may be dissolved in organic *solvents* or vegetable oils, if necessary after heat treatment, to form *varnishes*.
22 **30**	**nitrocellulose cellulose nitrate**	A resin produced by the nitration of cellulose and which is soluble in esters or ketones. NOTE The solubility of these resins is dependent on the degree of nitration and the *viscosity* of the solution is dependent on the molecular weight. They are mainly used for making *non-convertible coating materials*.
22 **31**	**non-aqueous dispersion (abbrev. NAD)**	A *dispersion* of reactive resin and other reactants, usually with added *pigments*, in a non-solvent organic liquid. On heating, after application, *film formation* is completed by evaporation of volatiles and *thermosetting* reactions.

No.	Term	Definition
22 **32**	**non-drying oil**	An oil that undergoes little or no oxidation when exposed to air and therefore has no film-forming properties. NOTE See *film formation.*
22 **33**	**oil length**	The ratio of oil to resin in a *medium*. The *oil length* may be expressed in terms of parts by mass of oil to one part by mass of resin, or in percentage terms.
22 **34**	**organosol**	A stabilized *dispersion* of a *thermoplastic* high *polymer* resin, usually with added *pigments*, in an organic liquid that is predominantly volatile. On heating, after application, the *coating* forms a *coherent film* (see *cohesion*) with simultaneous loss of organic carrier.
22 **35**	**petroleum resin**	A resin produced by the *polymerization* of low-boiling unsaturated compounds such as olefines and diolefines, which result from the cracking of petroleum. The resins are usually quite dark in *colour* and cannot be used in pale coloured products.
22 **36**	**phenolic resin**	A *synthetic resin* normally of *thermosetting* type produced by the reaction of a phenol, or its homologues, with an aldehyde, usually formaldehyde or a compound that is capable of providing methylene bridges. Phenol, cresol, xylenol and resorcinol are commonly used. NOTE The term includes both the simple condensation products (pure or 100 % phenolics), and those modified with *rosin* or *rosin* esters. *Phenolic resins* are reacted with *drying oils* to produce *media* for *paints.*
22 **37**	**plastisol**	A stabilized *dispersion* of a *thermoplastic* high *polymer* resin in an organic liquid of which a substantial portion is a *plasticizer* of low volatility and miscible with the resin at an elevated temperature, usually with added *pigment.* On heating, after application, the *polymer* and plasticizer fuse to a *coherent film*.
22 **38**	**polyol**	An alcohol having two or more hydroxyl groups per molecule. NOTE The term is widely used in the *synthetic resin* industry to cover such compounds as glycerol, pentaerythritol and trimethylolpropane.
22 **39**	**polyurethane alkyd**	A resin produced by reacting polyisocyanates with a suitable *alkyd resin.*
22 **40**	**polyurethane oil**	An oil produced by reacting polyisocyanates with *drying oils* which have undergone *alcoholysis* to yield partial esters containing free hydroxyl groups.
22 **41**	**polyurethane resin**	A *synthetic resin* produced by reacting a polyhydroxyl reactant, normally of polyester or polyether structure, with a polyisocyanate. NOTE *Polyurethane resins* are frequently supplied in two-pack form to be used immediately upon mixing.
22 **42**	**rosin**	A *natural resin* obtained from pine oleo-resin after removal of the volatile fractions. NOTE Two kinds of *rosin* are commercially available; gum *rosin* tapped from live trees and wood *rosin* obtained from dead wood such as stumps and knots.
22 **43**	**seedlac**	A granular form of purified *lac* produced from the crude resin by extraction with water.
22 **44**	**semi-drying oil**	An oil in which the degree of unsaturation and hence the drying characteristics are inferior to those of a *drying oil* such as *linseed oil.*

No.	Term	Definition
22 **45**	**shellac**	A collective name for the purified grades of *lac*. NOTE The most commonly occurring grade is orange *shellac* which is supplied in flakes. More refined grades such as dewaxed, bleached and garnet *shellac* are also available.
22 **46**	**short oil**	A low ratio of oil to resin in a *medium*, i.e. low *oil length*.
22 **47**	**silicone**	A member of a class of compounds in which the basic structure consists of silicon-oxygen linkages, which are very stable to heat and other influences. NOTE The class includes polymerizable high temperature resistant resins, lubricant greases and oils, organic solvent-soluble water repellents and surface tension modifiers for organic solvents.
22 **48**	**silicone-modified resin**	A *synthetic resin*, the properties of which have been modified with a substantial proportion of a *silicone* usually to improve resistance to *weathering* or to heat. NOTE Examples are silicone-modified *alkyd resin, epoxy resin* and *polyester resin*.
22 **49**	**size**	An aqueous solution of animal glue, cellulose derivative or starches used to seal porous *substrates*.
22 **50**	**soya bean oil**	A *drying oil* extracted from the soya bean that has inferior drying properties to *linseed oil* but which may be improved by suitable processing. It is used in the manufacture of *alkyd resins*. NOTE *Coating materials* containing *soya bean oil* are less prone to *yellowing* than those based on *linseed oil*.
22 **51**	**stand oil**	A *drying oil* polymerized by heating under substantially air-free conditions in contrast to *blown oil*. NOTE The unqualified term normally refers to linseed *stand oil* but may be applied to others. *Stand oils* dry to *films* that are generally tougher and more water resistant than pure *linseed oils*. The degree of change in properties depends on the extent of *polymerization* as indicated by *viscosity*.
22 **52**	**synthetic resin**	A member of a group of chemically produced substances that resemble and share some of the properties of *natural resins*. NOTE 1 The term is generally understood to mean a member of the heterogeneous group of compounds produced from simpler compounds by condensation and/or *polymerization*. NOTE 2 Chemically modified natural *polymers*, such as cellulose derivatives are not considered to be synthetic resins.
22 **53**	**tall-oil fatty acid**	The term applied to a complex mixture of fatty acids that is obtained as a by-product of the sulphite process in the paper pulp industry.
22 **54**	**tung oil** **china wood oil**	A *drying oil* expressed from various species of ALEURITES.
22 **55**	**vinyl resin**	A *synthetic resin* of the *thermoplastic* type obtained by the *polymerization* of *monomers* containing the vinyl group.

23 Additives

23 **02**	**activator**	A substance added in small quantity to another to promote its activity. NOTE 1 For example, traces of certain elements can promote the luminescence of zinc sulphide *pigments* in *luminous paints*. NOTE 2 Peroxides added to polyesters are sometimes called *activators*.
23 **03**	**anti-oxidant**	A material that inhibits the oxidation of *coating materials* during storage, or delays *drying* after application.

No.	Term	Definition
23 **04**	**anti-sagging agent**	A material incorporated in a *coating material* to reduce the tendency for *sagging* in the applied *film*. NOTE An example is *hydrogenated castor oil*.
23 **05**	**anti-settling agent** suspending agent *deprecated*	A substance incorporated in a *coating material* to delay the formation of sediment and to maintain uniform consistency during storage or, as in dipping *paints*, during painting operations.
23 **06**	**anti-skinning agent**	An *anti-oxidant* added in small quantities to a *coating material* to prevent the formation of a skin during storage.
23 **07**	**ballotini**	Very small transparent glass spheres having optical properties such that incident light is reflected back in the general direction of the source. NOTE *Ballotini* are incorporated in, or superimposed on, *paint films* or plastic *coating materials* to give increased visibility, e.g. in signs illuminated by car headlamps.
23 **08**	**castor oil**	A *non-drying oil* extracted from the seeds of RICINUS COMMUNIS. NOTE After refining, the oil is used in the manufacture of *dehydrated castor oil* for use as a constituent in the manufacture of certain *synthetic resins*. *Castor oil* may be also blown, the resulting product being used as a *plasticizer* in some *lacquers*. (See *blown oil, hydrogenated castor oil*.)
23 **09**	**cross-linking agent**	A compound that will react chemically with a polymeric material, giving rise to a three-dimensional network which is substantially insoluble in common *solvents*.
23 **10**	**curing agent**	An *additive* that promotes the chemical *curing* of a *film*. NOTE See also *catalyst* and *initiator*.
23 **11**	**denaturant**	A substance added to industrial ethyl alcohol to render it unfit for human consumption.
23 **12**	**dewatering agent (1)**	A fluid containing a *surfactant* (e.g. a quaternary ammonium compound) that when added to a liquid *paint* enables it to be applied to a damp *substrate*.
23 **13**	**dewatering agent (2)**	A fluid applied to a *substrate* to remove water from it.
23 **14**	**dispersing agent** **dispersant**	An *additive* used in the manufacture of *coating materials* to facilitate the *dispersion* of the solid components in the liquid phase.
23 **16**	**flatting agent** **matting agent**	A product incorporated in a *coating material* to reduce the *gloss* of the dried *film*.
23 **17**	**fungistat**	A material that when added to a *coating material* restricts fungal growth. NOTE An example is zinc oxide.
23 **18**	**hardener**	A material that, by chemical reaction, enhances the hardness of a *coat*.
23 **19**	**hydrogenated castor oil**	*Castor oil* that has been converted to a waxy product by reacting it with hydrogen in the presence of a suitable metallic *catalyst*.
23 **20**	**initiator**	A substance capable of starting a *polymerization* reaction. NOTE See *catalyst*.
23 **22**	**(in can) preservative**	A substance added in small quantities to a *coating material* to protect it against bacterial degradation. NOTE *Preservatives* are generally used in *water-based paints*.

No.	Term	Definition
23 **23**	**retarder**	A substance added to slow down a chemical or physical change. A slowly evaporating *solvent* may be added to a *coating material* to delay the *set* of the *film* after application and to improve the application properties, or to give a better *film*, e.g. one with improved *flow*. NOTE A *retarder* may be added to plaster to retard its setting.
23 **24**	**stabilizer**	A substance added, usually in small proportions, to retard undesirable chemical or physical changes. NOTE For example, small quantities of stabilizers are added to retard the dehydrochlorination of *chlorinated rubber* or the coagulation of an *emulsion*.
23 **25**	**thickener**	A material added to water-borne *coating materials* to increase the *viscosity* thus enabling application of thicker *films*.
23 **26**	**turpentine** **turps**	A colourless volatile liquid distilled from the products of certain pine trees and consisting of a complex mixture of terpene hydrocarbons. NOTE *Turpentine* was formerly extensively used in *paints* and *varnishes* but has now been largely replaced by *white spirit*.
23 **27**	**white spirit**	A straight-run or blend of petroleum hydrocarbons with a boiling range lying between 150 °C and 200 °C used as a *thinner* for *coating materials*. NOTE Turpentine substitute is a deprecated term for a petroleum distillate of the *white spirit* type.

3 Equipment, manufacturing plant and techniques

31 Pigment and paint-making processes

31 **01**	**attritor**	A machine used to disperse *pigment* by subjecting the *mill-base* to the action of small balls of the order of 2 mm to 5 mm diameter kept in motion by a rotor.
31 **02**	**ball mill**	A machine consisting essentially of a cylindrical vessel that, when charged with the appropriate quantity of ceramic or metal spheres of suitable sizes, and rotated at the correct speed about its longitudinal axis, can be used either for the dry *grinding* of solids or for the *dispersion* of solids in liquids.
31 **03**	**Banbury mixer**	An enclosed mixer, named after its inventor, consisting essentially of a cylindrical vessel in which solids may be dispersed in polymeric materials by rotating blades. The vessel and rotors are hollow so that they can be heated or cooled to control the temperature of the materials being processed.
31 **04**	**bead mill**	A mill operating on generally similar principles to a *sand mill* but often orientated horizontally and usually involving *grinding* agents of larger diameter.
31 **05**	**colloid mill**	A machine designed to produce adequate *dispersions* from premixed pastes or slurries. It consists of a ring of carborundum or steel rotating at high speeds beneath a static disc of the same material. The *mill-base* is sheared between the ring and the static disc.
31 **06**	**colour dispenser**	A device, mechanical or electronic, normally installed near the point of sale, for adding to previously filled packages of *paint* predetermined volumes of appropriate *tinter* to adjust the *colour* in accordance with the requirements of the ultimate customer.

No.	Term	Definition
31 **07**	**critical speed**	The rotational speed of a *ball mill* above which the centrifugal forces during the dispersing process impede the cascading motion of the grinding agents in the *mill-base*.
31 **08**	**edge-runner mill**	A mill usually consisting of a horizontal circular pan. One or more rollers are made to rotate edge-wise around the pan. The pan and rollers may be made from cast iron or stone.
31 **09**	**filtration**	The mechanical separation of finely suspended matter from associated liquids by means of a porous membrane or fine mesh.
31 **10**	**grinding**	The process that achieves the breaking down of particles of *pigment* to smaller sizes.
31 **11**	**hammer mill**	A type of mill used for pulverizing dry materials in which the disintegration is caused by the flailing action of a series of small hammers rotating at high speed within a mesh of suitable size.
31 **12**	**heavy-duty mixer** **internal mixer**	A machine consisting of a cylindrical container in which materials are masticated by rotating blades or rotors. The container and rotors are cored so that they can be heated or cooled to control the temperature of the charge.
31 **13**	**high speed disperser** cavitation mixer *deprecated*	A machine consisting of a shaft-mounted impeller which when rotated at high speeds imparts a shearing action to disperse solids in liquids.
31 **14**	**horizontal mixer** **pug mill**	A U-shaped vessel fitted with a lid and having blades on a centrally-mounted shaft that is capable of rotating about a horizontal axis.
31 **15**	**maturing**	Of varnishes. The process by which clarity, brightness, working properties, etc. of *varnishes* are improved by storage in tanks.
31 **16**	**mill-base**	The mixture of resins, *solvents, pigments* and *additives* that is milled together to produce the *dispersion* from which a pigmented *coating material* is prepared.
31 **17**	**paint conditioner**	A mechanical device that restores to an homogenous state a *coating material* that has undergone *settling* during storage, by shaking the sealed container.
31 **18**	**pebble mill**	A *ball mill* in which the grinding agent is composed of pebbles.
31 **19**	**pin mill**	A mill similar to a *hammer mill* except that the hammers are replaced by fixed pins as the concussive elements. Usually, these pins are attached to a rotor that engages a stator similarly fitted with pins.
31 **20**	**premixer**	Any machine used for thoroughly pre-blending constituents in either the dry or liquid state. Various types of internal mixer are used.
31 **21**	**roller mill** **(three-roll mill;** **five-roll mill)**	A machine used to disperse a *pigment* by passing a *mill-base* between two rollers rotating at different speeds. The process may be repeated through a series of rollers, hence three- or five-roll mills.
31 **22**	**sand mill**	A vertical cylinder, charged with sand and fitted with a rotating shaft on which discs are fixed and into which a premix of *pigment* and *medium* is run. After being dispersed the charge is expelled through a sieve which retains the sand. NOTE The sand may be replaced by glass beads.
31 **23**	**Z-blade mixer**	A mixer similar to a *horizontal mixer* but with the single blades replaced by two Z-shaped intermeshing blades.

32 Powder coating machinery

No.	Term	Definition
32 **01**	**breaker**	A machine that converts sheeted *powder coating material* into small irregular-shaped flakes.
32 **02**	**classifier**	A device for accurately separating particles of the desired size from a ground powder.
32 **03**	**cooler** **flaker**	A machine consisting of steel rollers and a cooled conveyer belt, for transforming the hot extrusion to a thin sheet.
32 **04**	**cyclone**	Equipment used to recover those particles lying outside the usable size range.
32 **05**	**extruder**	A machine for forcing premixed constituents of a *powder coating material* in a molten state through an orifice.
32 **06**	**grinder**	A machine for reducing the flakes from the *breaker* to a powder of usable particle size (typically between 5 μm and 10 μm).

4 Paint types, characteristics and properties

41 Paint types

41 **01**	**acid-resistant paint**	A *coating material* designed to resist attack by acids under specified conditions.
41 **02**	**acrylic primer**	A *coating material*, based on a *water-borne acrylic resin*, used to prime wood, masonry or metal.
41 **03**	**aerosol paint**	A specially formulated *coating material* packed under pressure in specially designed cans. NOTE The highly volatile *dispersant* enables the *coating material* to be applied in the form of an atomized spray when the pressure is released by depressing a valve on the top of the can.
41 **04**	**algicidal paint**	A *coating material* incorporating special *additives* to discourage the growth of algae on the surface of the dry *film*.
41 **05**	**alkali-resistant paint**	A *coating material* designed to resist attack by alkalis under specified conditions.
41 **06**	**aluminium wood primer**	A *coating material* containing a portion of aluminium *pigment* that is used as a *barrier coat* to overcome *bleeding* from resinous woods or timber that have been treated with wood preservatives.
41 **07**	**anti-condensation paint**	A *coating material* designed to minimize the effects of condensation of moisture under intermittently dry and humid conditions. NOTE Such a material normally has a *matt*, textured *finish* and frequently contains cork or some other heat-insulating material as a *filler*.
41 **08**	**anti-corrosive paint** **anti-corrosive composition** **anti-corrosion paint**	A *coating material* used to retard the corrosion of metals and, more particularly, specially formulated to retard the rusting of iron or steel.
41 **09**	**anti-fouling paint** **anti-fouling composition**	A *coating material* applied to the bottom of ships to discourage the growth of barnacles and other organisms. NOTE Anti-fouling paint usually contains substances that are poisonous to such organisms in the early stages of growth.
41 **10**	**bactericidal paint**	A *coating material* incorporating special *additives*, to discourage the growth of bacteria on the surface of the dry *film*.

No.	Term	Definition
41 **11**	**barrier coat**	A *coating material* used to isolate a *coating system* from the *substrate* to which it is applied in order to prevent chemical or physical interaction. NOTE For example to prevent the coating *solvent* from attacking the underlying *coat* or to prevent *bleeding* from an underlying *coat* or *substrate*.
41 **12**	**base coat**	The first decorative *coat* of a multicoat *coating system* before overcoating with a *clear coat*.
41 **13**	**Berlin black**	The name applied to a pigmented form of *Brunswick black* producing a *semi-gloss finish*.
41 **14**	**bituminous paint** **bitumen paint** **bitumen-based coating material**	A *coating material* consisting essentially of *bitumens* dissolved in organic *solvents*, and which may contain softening agents, *pigments* and inorganic *fillers*. NOTE 1 Extension of the term "bituminous" to cover materials not of petroleum origin, e.g. *coal tar pitch*, is deprecated. NOTE 2 An alternative definition of *bitumen-based coating material* is given in BS 6949.
41 **15**	**black japan** **japan black**	A black *varnish* containing a *drying oil* and a compatible *bitumen*, such as gilsonite, that dries to a hard *film* by oxidation. NOTE The resultant *coat* can be varnished over without *bleeding*.
41 **16**	**black varnish**	A *varnish*, used in the electrical industry for impregnation of electrical components, based on *drying oils* and/or *synthetic resins* in combination with bituminous substances.
41 **17**	**blast primer**	A *coating material* that is applied to a ferrous *substrate* directly after blast cleaning. Certain types of *blast primer* may not have to be removed prior to welding. NOTE See *prefabrication primer*.
41 **18**	**bronzing lacquer**	A transparent *lacquer* for application to bright metal in order to preserve lustre and enrich *colour*.
41 **19**	**bronzing medium** **bronzing liquid**	A *vehicle*, either a *varnish* or a *lacquer*, that is specially formulated for use as a *binder* with aluminium or gold-bronze powders.
41 **20**	**Brunswick black**	A solution of *bitumen*, or similar material, in *white spirit*, or aromatic hydrocarbon *solvent*.
41 **21**	**cement paint**	A *coating material* based on Portland cement and supplied as a dry powder.
41 **22**	**clear coat**	The transparent *top coat* applied over a *base coat*.
41 **23**	**coal tar pitch**	The black or dark brown solid or semi-solid fusible and agglomerating residue remaining after partial evaporation or fractional distillation of coal tar.
41 **24**	**colour wash**	Earth *pigments*, with or without inorganic *filler*, lightly bound in glue *size* so as to facilitate ready removal where frequent removal is necessary. NOTE An example is tinted lime wash.
41 **25**	**conducting paint**	A *coating material* designed to produce an electrically conducting *film* by incorporation of metallic or conducting carbon *pigments*.
41 **26**	**convertible coating material**	A *coating material* that, on *drying* (by oxidation or other chemical reaction), forms a *film* insoluble in the original *solvent*.
41 **27**	**distemper**	An interior *water-borne coating material* in which the solid *pigment* is bound predominantly with glue, casein or similar *binder*.

No.	Term	Definition
41 **28**	**dope**	A class of lacquer-like materials used in the *coating* of textiles and leather.
41 **30**	**enamel paint**	Pigmented organic polymeric *binders* that simulate the appearance, *flow*, smoothness and *gloss* of fused inorganic *coatings*.
41 **31**	**epoxy paint**	A *coating material* based on an *epoxy resin*. NOTE The term is often qualified to indicate the nature of the necessary cross-linking agent used, e.g. epoxy/isocyanate where the agent is *isocyanate* and is added to the epoxy-based material immediately prior to use.
41 **32**	**etch primer** **wash primer** **pretreatment primer** **self-etch primer**	A *coating material* often supplied as two separate components that are mixed immediately prior to application and have a limited pot-life. The mixed *coating material* contains balanced proportions of a chromate-based *inhibitive pigment*, phoshoric acid and a *synthetic resin binder* in a mixed alcohol *solvent*, generally a polyvinyl butyral.
41 **33**	**flat enamel paint**	An *enamel paint* with a *matt finish* obtained usually by the incorporation of a *flatting agent*.
41 **34**	**flat varnish**	A *varnish* that gives a *matt* or *eggshell finish* as a result of the incorporation of metallic soaps or transparent *fillers*.
41 **35**	**flatting varnish**	A *varnish* containing a high proportion of a hard resin, that can be rubbed down to produce a smooth surface.
41 **36**	**fluorescent paint**	A *coating material* containing *pigment* capable of absorbing energy from the blue or ultraviolet part of the spectrum and re-emitting energy in the form of light of longer wavelengths. The emission ceases when the activating source is removed.
41 **37**	**French polish**	A material composed essentially of *shellac* and methylated spirit. It is applied with a cambric-covered pad of cotton wool, lubricated with linseed oil.
41 **38**	**fungicidal paint**	A *coating material* that discourages the growth of surface moulds on the dry *film*. This property is normally conferred by the use of special *additives*, although certain *pigments* may themselves contribute to the fungicidal property of the *paint*.
41 **39**	**glaze coat**	A translucent or transparent *coating material*, sometimes coloured, applied thinly with the object of enhancing but not obscuring the *ground coat*.
41 **40**	**gold size**	An *oleo-resinous varnish* used in two forms: a) a composition that dries rapidly to a *tacky* condition and hardens slowly, used as an adhesive for fixing gold leaf to a *substrate*; b) a composition containing a high proportion of *driers* that rapidly dries hard after application, used in the preparation of *stoppers* and *fillers*.
41 **41**	**ground coat**	A *coating material* having good *hiding power* that is applied before a *glaze coat* or a *scumble*. The final *colour* effect when glazed is dependent on the mutual influence of the *ground coat* and the *glaze coat*.
41 **42**	**heat-resistant paint**	A *coating material* with some resistance to heat. NOTE The term is used in a comparative sense but is of little value unless it is referred to some standard of performance under specified conditions.

No.	Term	Definition
41 **43**	**insulating varnish**	A *varnish*, sometimes used in conjunction with other materials such as mica, fabric or paper, to provide electrical insulation. NOTE See wire enamel.
41 **44**	**knotting**	A quick-drying *coating material* used in the preparation of joinery prior to painting to provide an impervious *film* applied specifically over knots and other resinous areas liable to stain or soften a superimposed *coat*. NOTE The most usual composition consists of a solution of *shellac* in industrial methylated spirit.
41 **45**	**lacquer (1)**	*Air drying*. A transparent *coating material*, that may be coloured, and that dries solely by evaporation of *solvents*. NOTE 1 Examples are cellulose *lacquer* and acrylic *lacquer*. NOTE 2 The use of the term *lacquer* to describe a pigmented *paint* is deprecated.
41 **46**	**lacquer (2)**	*Stoving*. A coloured transparent *stoving finish* that does not dry solely by evaporation of the *solvent*. NOTE The use of the term *lacquer* to describe a pigmented *paint* is deprecated.
41 **47**	**lead-based paint**	A *coating material* that contains lead-based *pigments* in substantial quantities.
41 **48**	**low-lead paint**	A *coating material* that has a lead content controlled below that specified in relevant legislation.
41 **49**	**luminous paint**	A *coating material* that exhibits phosphorescence.
41 **50**	**metallic paint**	A *coating material* that upon application gives a *film* with a metallic appearance. The effect is normally produced by the incorporation of fine flakes of metals such as copper, bronze or aluminium, that are non-leafing or *leafing*; the latter giving a more lustrous appearance. NOTE See *polychromatic finishes*.
41 **51**	**mist coat (1)**	A thin *film* of volatile *thinner*, with or without a small amount of *lacquer*, that is sometimes sprayed over a dry *lacquer film* to improve smoothness and lustre.
41 **52**	**mist coat (2)**	A thin *coat* of *paint*, not intended to form a protective *film* but to enhance the *adhesion* of subsequent coats.
41 **53**	**moisture-curing coating material**	A *coating material* in which the *film* cross links and hardens when exposed to atmospheric moisture.
41 **54**	**multicolour paint**	A *coating material*, usually for application by *spraying* to produce a mottled or flecked appearance in two or more *colours*.
41 **55**	**non-convertible coating material**	A *coating material* that, on *drying*, forms a *film* that is soluble in the original *solvent*.
41 **56**	**oil-bound water paint**	A water *paint* in which the properties have been enhanced by the addition of a certain amount of emulsifying *drying oil*.
41 **57**	**oleo-resinous varnish**	A *varnish* composed of vegetable *drying oils* in combination with either *natural* or *synthetic resins*.
41 **58**	**one-coat paint**	A *coating system* composed of a single *coat*.
41 **59**	**phosphorescent paint**	A *luminous paint* containing *pigments* (phosphors) which absorb energy at one wavelength and emit it over a period in the form of light, at a longer wavelength in the visible spectrum. NOTE *Phosphorescent paint* differs from *fluorescent paint* in that it continues to emit energy after the stimulating source has been removed.
41 **60**	**pink primer**	A *primer* based originally on white and red lead *pigments*. Now used loosely to describe wood *primers*, pink in colour, but based on *pigments* other than lead.

No.	Term	Definition
41 **61**	**plaster primer**	A *primer* with resistance to alkali, that is used for priming plaster, cement and renderings.
41 **63**	**prefabrication primer**	A quick-drying *coating material* applied as a thin *film* to a metal *substrate* after cleaning, to give protection in the period before and during fabrication. NOTE See also *blast primer*.
41 **64**	**primer**	The *coating material* used to provide a *priming coat*.
41 **65**	**primer surfacer**	A pigmented material, essentially a thin *filler* and/or *sealer*, designed particularly for smoothing up slightly uneven *substrates* in preparation for the subsequent application of a *coating system*. NOTE It is normally sanded to a smooth surface after *drying*.
41 **67**	**radioactive paint**	A *luminous paint* containing radioactive materials which cause the phosphors to emit light.
41 **68**	**resistance weld primer**	A *coating material* that is applied to an unpainted metal *substrate* for temporary protection against corrosion and that does not have to be removed prior to resistance welding.
41 **69**	**round coat**	A thick *coat* of a heavy-bodied *paint* or *varnish*.
41 **70**	**sanding sealer**	A *coating material* that has the special property of sealing or *filling* but not necessarily obscuring the grain of a wooden *substrate*. When dry the surface is suitable for sanding. NOTE See also *sealer, filler*.
41 **71**	**scumble glaze**	A transparent preparation used in the *scumbling* process.
41 **72**	**scumble stain**	A semi-transparent *stain* for application over an opaque groundwork of *paint*. NOTE Brush, stipple or sponge may be used for manipulating the scumble or it may be combed so that various effects, e.g. wood graining or more formal patterns, are formed.
41 **73**	**sealer** **sealing coat**	A clear or pigmented liquid applied to absorbent *substrates* prior to painting which when dry reduces the absorptive capacity of the *substrate*. NOTE A *sealer* may also be needed to prevent *bleeding* from an existing painted *substrate* or softening of that *substrate* by the *solvents* in a newly applied *coat*.
41 **74**	**shop primer**	A protective *coating material* for application to a component that is subsequently to be finished on site.
41 **75**	**solventless paint** **solventless varnish**	An organic *coating material* containing no volatile *thinner*. NOTE In practice the term is sometimes extended to describe a *coating material* containing a small proportion of volatile matter.
41 **76**	**spatter paint**	A *coating system* that produces a textured surface, usually in the form of large spots or droplets and usually includes a *ground coat* of the same material or *colour*. NOTE Special spray equipment and some skill is required for satisfactory application.
41 **77**	**spirit lacquer** **spirit varnish**	A *lacquer* based on a solution of resin(s) in industrial methylated spirit.

No.	Term	Definition
41 **78**	**stain** **oil stain** **spirit stain** **water stain**	A solution or suspension of colouring matter in a *vehicle*, designed to colour a *substrate* by penetration without hiding it. True *stains* are classified as water *stains*, oil *stains* and spirit *stains* according to the nature of the *vehicle*. NOTE The so-called varnish stains are *varnishes* coloured with a transparent material. These do not have the same power of penetration as the true *stains* and leave a coloured *coating material* on the *substrate*.
41 **79**	**stoving enamel paint**	An *enamel paint* that is cured by heat treatment.
41 **80**	**temporary protective strippable coating**	A material used to protect metallic *substrates* during fabrication, transport and storage, and which is readily removable, if required, by *stripping* or cold application of common *solvents*.
41 **81**	**textured paint**	A *coating material* that by its composition or method of application gives a textured *finish*.
41 **82**	**thermoplastic roadmarking composition**	A *coating material* consisting of *pigments, extenders*, mineral *aggregates* and resins that is applied in the molten state as markings on roads.
41 **83**	**thixotropic paint**	A *coating material* that, while free-flowing and easy to manipulate under the brush, sets to a gel within a short time when it is allowed to remain at rest. NOTE Because of this property the material is less likely to drip from the brush than other types and can be applied in rather thicker *films* without *running* or *sagging*.
41 **84**	**tie coat**	A product, usually unpigmented, designed to improve intercoat *adhesion* by slightly softening the dry *film* to which it is applied and being softened in turn by the *coating material* subsequently applied to it.
41 **85**	**two-pack paint**	A *coating material* that is supplied in two parts which have to be mixed in the correct proportions before use. The mixture will then remain in a usable condition for a limited time. NOTE The two parts of a *two-pack paint* are often supplied in the correct proportions either in entirely separate containers of appropriate sizes or in a single container divided into two compartments; the term "dual-pack" is often used to describe the latter type of container.
41 **87**	**water-borne paint**	A *paint* in which the *pigment* and *binder* are dispersed or dissolved in a continuous phase that consists essentially of water.
41 **88**	**water-dispersible paint**	A *paint* consisting of a stable *dispersion* in water with little or no tendency to separate during storage.
41 **89**	**water-reducible paint** **water-thinnable paint**	A *paint* which is readily thinnable with water.
41 **90**	**welding primer**	A *coating material* that is applied to an unpainted metal surface for protective purposes which does not have to be removed prior to acetylene welding and does not prevent the making of a satisfactory weld.
41 **91**	**wire enamel**	A *coating material*, usually unpigmented, applied to copper wire to confer insulating properties when the wire is subsquently used in electrical equipment.
41 **92**	**zinc phosphate primer**	A *coating material* containing zinc phosphate *pigment* for application to steel to inhibit corrosion.

No.	Term	Definition
41 **93**	**zinc-rich primer**	An anti-corrosive *coating material* for iron and steel incorporating zinc dust in a concentration sufficient to give cathodic protection whereby the dry *film* is electrically conductive, enabling the zinc metal to corrode preferentially to the *substrate*.

42 Characteristics and properties

42 **01**	**abrasion resistance**	Resistance to frictional rubbing. NOTE This is not to be confused with *impact resistance*.
42 **02**	**body consistency**	The *apparent viscosity* of a *coating material* as assessed subjectively when applying a shearing force, e.g. when pouring the material from a can, stirring, or brushing or otherwise spreading over a surface.
42 **03**	**bodying (1)**	An increase in the *consistency* of a *coating material* that occurs either deliberately during manufacture, or inadvertently during storage. NOTE See also 80 **11**.
42 **04**	**chip resistance**	The resistance of the *film* of a *coating material* to localized damage caused by impact and applied particularly to the resistance of car body *finishes* to stones and grit.
42 **05**	**cold curing**	The process of *curing* at ambient temperature without the application of heat.
42 **08**	**dilatancy**	The property of a *paint* or *pigment paste* that is manifested as a thickening or solidification on application of a shearing force.
42 **09**	**dry to handle**	The state of *drying* when a *coat* can be handled without damage.
42 **10**	**dust-dry**	The state of *drying* when dust no longer adheres to the surface of a *coat*.
42 **11**	**eggshell finish**	A coated surface which exhibits diffuse reflectance which is intermediate between a *semi-gloss finish* and a *matt finish*.
42 **12**	**erosion**	The wearing away of the top surface of a *coat*, e.g. by *chalking* or by the abrasive action of wind-borne grit, which may result in exposure of the underlying surface.
42 **13**	**false body**	The effect observed in some types of *coating material* when they are agitated. They undergo a marked reduction in *viscosity* which quickly returns to its former level when the shearing force is removed. NOTE See also *thixotropy*.
42 **14**	**fastness to acid**	The ability to retain chemical and physical properties after exposure to acids under specified conditions.
42 **15**	**fastness to alkali**	The ability to retain chemical and physical properties after exposure to alkalis under specified conditions.
42 **16**	**fastness to heat**	The ability to retain chemical and physical properties after exposure to heat under specified conditions.
42 **17**	**fastness to light**	The ability to retain chemical and physical properties after exposure to natural or artificial light of specific characteristics and under specified conditions.
42 **18**	**flamboyant finish**	A *finish* produced by the application of a transparent, coloured, *gloss* finishing *coat* over a bright metallic surface or a *coat* of *metallic paint*.

No.	Term	Definition
42 **20**	**flow**	The degree to which the wet *film* of a *coating material* can flow out during and after application to produce a uniform smooth surface.
42 **21**	**frosting**	A translucent, finely wrinkled surface effect which occurs during *drying*, and which may be produced deliberately to mask imperfections on the *substrate* or to achieve other desirable visual properties. NOTE *Frosting* is normally considered, however, to be a defect (see also *webbing* and *gas checking*.
42 **22**	**full coat**	The thickest *coat* that can be applied in a single application to give a *film* which, when dry, is free from defects.
42 **23**	**full gloss** **gloss finish**	The *film* of a *coating material* that, when dry, has a smooth almost mirror-like surface.
42 **24**	**gelling (1)**	The deterioration of a *coating material* by irreversible change, partial or complete, to an insoluble gel unworkable even by the addition of *solvent*. NOTE This is often termed livering, in the early stages of deterioration.
42 **25**	**gelling (2)**	The reversible formation, usually intentional, of a gel-like condition that reverts to a usable state by the application of forces such as stirring or brushing. NOTE See also *thixotropy*.
42 **27**	**hammer finish**	A *finish* produced by certain *coating materials* containing metal powder and other *additives* that, when dry, exhibit an appearance similar to that of hammered metal.
42 **28**	**hard dry film**	A *film* of a *coating material* which is dry enough for a further *coat* to be applied satisfactorily by brushing, after *flatting down*.
42 **30**	**heavy-bodied coating material**	A *coating material* having a thick *body* or high *viscosity* and the ability to leave, after *drying*, a substantial *coat*.
42 **32**	**high-build**	The property of a *coating material* which permits the application of a *coat* of greater than normal thickness. NOTE *High-build* can be achieved by *thixotropy*, low volatile content or the chemical *curing* of low *viscosity* components.
42 **33**	**high solids**	A term applied to *coating materials* in which, by the choice of suitable ingredients, the content of volatiles present is kept to a minimum, consistent with the maintenance of satisfactory application properties.
42 **34**	**hold out (1)**	The ability of the *film* of a *coating material* to dry to its normal *finish* on an absorptive *substrate*.
42 **35**	**hold out (2)**	The relative tendency of different *undercoats* to affect the *gloss* when coated with a finishing *coating material*.
42 **36**	**leafing**	The action involving the floating and slight overlapping of certain metallic and other *pigment* particles, in the form of thin flakes, in the surface of the *film* of a *coating material*. NOTE See metallic paint.
42 **37**	**matt** **flat**	The description of a painted surface that scatters or absorbs the light falling on it so as to be substantially free from *gloss* or *sheen* when viewed at any angle.

No.	Term	Definition
42 **38**	**polychromatic finish**	A painted surface that has a metallic lustre and exhibits an irridescent scintillating effect when viewed from different angles. NOTE The effect is produced by the application of special *lacquers* or *paints* that contain metallic flakes, in addition to transparent colouring matter.
42 **40**	**semi-gloss finish**	A painted surface that gives a level of *gloss* between an *eggshell finish* and a *full gloss*.
42 **41**	**settling**	The sedimentation of solid constituents, e.g. *pigments* and *extenders*, from a *coating material* whilst standing in a container.
42 **43**	**solvent-borne material**	A material that is dispersed or dissolved in suitable organic *solvents*.
42 **44**	**tack**	Slight stickiness of the surface of the *film* of a *coating material*, apparent when it is pressed with a finger.
42 **45**	**tack-free**	Free from *tack*, even under pressure.
42 **46**	**thickening**	An increase in the *consistency* of a *coating material*.
42 **47**	**thixotropy**	The process whereby a *coating material* undergoes a reduction in *body* when mechanically disturbed and slowly reverts to the original condition on standing. NOTE See also *false body*.
42 **48**	**throwing power**	A measure of the ability of a *coating material* to be applied by *electrodeposition* in the deep and semi-enclosed regions of an object, e.g. within the box sections of a motor vehicle.
42 **49**	**tooth**	A property of the dry *film* of a *coating material* that contains a proportion of relatively coarse or abrasive *pigment*, which improves the rubbing properties and also the *adhesion* of subsequent *coats*.
42 **50**	**touch dry**	The state of *drying* when slight pressure applied by a finger does not leave an imprint or reveal *tackiness*.

5 Surface preparation and the application of coating materials

NOTE Where a term is used in the context of the surface preparation of steel *substrates*, reference should be made to BS 7079-0 which contains definitions with a more specific meaning.

51 Substrates and their surface preparation

51 **01**	**abrasive blast-cleaning**	The impingement of a high kinetic energy stream of abrasive on to the surface to be prepared. NOTE 1 See also the term "blasting" in ISO 2080:1981. NOTE 2 Main groups of *abrasive blast-cleaning* methods are dry abrasive blast-cleaning, moisture injection abrasive blast-cleaning and wet abrasive blast-cleaning.
51 **02**	**anodizing**	A treatment of aluminium by an electrolytic oxidation process to give an anodic *coat* consisting mainly of aluminium oxide which modifies the surface to give improved resistance to corrosion but which, to achieve good *adhesion* of *paint films*, may require further treatment with an *etch primer*.
51 **03**	**biocidal wash**	A solution containing fungicides and/or algicides that is applied to a *substrate* before painting to kill existing fungal or algal contaminations or to prevent their development. NOTE Many of these solutions are toxic and therefore need careful handling.

No.	Term	Definition
51 **04**	**bringing forward**	In repainting. Repairing local defective areas with the appropriate *coating materials* so as to bring them into conformity with the surrounding areas before applying the finishing *coats*.
51 **05**	**burning off**	The removal of *paint* by a process in which the *paint* is softened by heat, e.g. from a flame, and then scraped off while still soft. NOTE See also *stripping*.
51 **06**	**caulking compound**	A heavy non-drying or slow *drying* paste with or without fibrous material used to seal joints between wooden planks or metal plates to render them watertight.
51 **07**	**chipping**	The removal of *paint* or rust and scale in flakes, by use of hand or power tools, e.g. chipping hammers.
51 **08**	**chromating**	Treatment of metals, e.g. zinc, cadmium or light alloys, by chemical solutions usually containing chromic acid and/or chromates to modify the surface to give improved protection against corrosion and to serve as a good base for subsequent painting.
51 **09**	**degreasing**	The removal from a surface, prior to painting, of mineral oils, greases and similar substances by means either of a *solvent*, e.g. trichloroethylene, or an emulsifying agent. NOTE 1 This definition is relevant to industrial but not to decorative *finishing* practice. NOTE 2 See also *vapour degreasing*.
51 **10**	**de-nibbing**	Removing, by rubbing with fine abrasive paper, any small particles of foreign matter which stand proud on the surface of a *paint film*.
51 **11**	**descaling** **scaling**	The removal of *mill scale* or laminated rust from steel or other ferrous *substrates*.
51 **12**	**emulsion cleaner**	Liquid *wetting* material for removing oily residues and detritus from surfaces prior to applying a protective *coating material*. NOTE Emulsion cleaner is normally available as an aqueous *emulsion* or readily forms an aqueous *emulsion*.
51 **13**	**etching**	Cleaning and roughening a surface using a chemical agent prior to painting in order to increase *adhesion*.
51 **14**	**feather edging**	Tapering, usually by abrading, the thickness of the edge of a dry *coating system*, e.g. the edge of a damaged area, prior to repainting. NOTE "Bevelled back" is also used to describe such tapering.
51 **15**	**felting down**	The operation of *flatting down* the dry *film* of a *coating material* by means of a pad made of felt or similar material, charged with a very fine abrasive powder and lubricated with water or other suitable liquid.
51 **17**	**flame cleaning**	The short time application of a reducing oxygen/fuel flame to structured steel, followed by power tool wire brushing. NOTE This definition relates specifically to flame cleaning in accordance with BS 7079-A1.
51 **18**	**flatting down** **rubbing down**	Abrading the surface of a dry *coating material* with fine, dry or wet abrasives to produce a smooth dull surface.
51 **19**	**galvanizing**	A process whereby suitably pretreated steel is given a *coat* of zinc by immersion in the molten metal.

No.	Term	Definition
51 **20**	**glazing putty**	A type of *putty* based on an inorganic *filler* and *linseed oil*, used for fixing glass panes in wooden frames.
51 **21**	**grit blasting**	*Abrasive blast-cleaning* using grit as the particulate material. Grit can be of alumina, waste metal slags, iron or steel.
51 **22**	**ground**	Any surface suitably prepared for the reception of *paint*.
51 **23**	**hackles**	Raised slivers of steel which sometimes protrude above the surrounding profile. NOTE See BS 7079-C1.
51 **24**	**hard stopping**	A material in a stiff paste form that is usually applied by means of a knife, to fill deep indentations in a *substrate*, and that dries hard throughout. NOTE Hard stopping should not be confused with *glazing putty* which has a different consistency and which hardens more slowly.
51 **25**	**key**	Any special quality, e.g. roughness, of the *substrate* which assists *adhesion* of a *coat*.
51 **26**	**knifing filler**	A *filling* composition suitable for application with a filling knife as distinct from one made for brush application.
51 **27**	**loose scale**	*Mill scale* that has been loosened by rusting and can be lifted from the steel surface by means of a scraper.
51 **28**	**making good**	The rectification of defects in a surface to be painted by the local application of *filler* or plaster.
51 **29**	**masking**	Application of a temporary cover to that part of a surface which is not to be painted.
51 **30**	**mastic**	A generic term used to describe a plastic *filler, stopper, putty, or adhesive*.
51 **31**	**metal casement putty**	A type of *putty* based on an inorganic *filler* and, in most cases, a non-hardening *binder*, used for fixing panes of glass in metal frames.
51 **32**	**mill scale**	The layer of iron oxides produced during the hot rolling of steel.
51 **33**	**neutralizing solution** **stabilizing solution**	A chemical solution or cleaning compound used to counteract the potentially harmful effects of substances (normally acids or alkalis) emanating from structural materials or from residues left on surfaces.
51 **34**	**paint remover**	A material that, when applied to a coated *substrate*, softens the *coating material* so that it can be removed easily.
51 **35**	**petrifying liquid**	An obsolescent product, consisting of a dilute *emulsion* of *drying oil* and/or resins in water; formerly used as a sealing *coat* before the application of an *oil-bound water paint* to a porous *substrate*.
51 **36**	**phosphating** **bonderizing** **phosphate treatment**	Pretreatment of steel or certain other chemical solutions containing metal phosphates and phosphoric acid as the main constituents, to form a thin, inert, adherent, corrosion-inhibiting phosphate layer which serves as a good base for subsequent *paint coats*.
51 **37**	**pickling**	A process by which rust and *mill scale* are removed from steel by immersion in an acid solution containing an *inhibitor*, followed by thorough washing and drying before painting.
51 **38**	**pitting**	The formation due to corrosion, of small cavities in a metal *substrate*.

No.	Term	Definition
51 **39**	**preparation grade**	A classification describing the degree of cleaning achieved on steel surfaces by a given surface preparation method and procedure. NOTE Grades for the visual cleanliness of prepared surfaces are defined by written descriptions supported by representative photographic examples. See BS 7079-A1.
51 **40**	**pretreatment**	The chemical treatment of unpainted metal surfaces prior to painting. NOTE See *anodizing, chromating, phosphating* and *pickling.*
51 **41**	**putty**	A dough-like preparation which is applied by a knife and which normally hardens on exposure to air. NOTE See also descriptions of types.
51 **42**	**raised grain (1)**	The undue prominence of fibres arising from the wood structure due to absorption of water or materials containing water.
51 **43**	**raised grain (2)**	The prominence of the harder portions of the grain of wood when the softer portions have suffered shrinkage or erosion.
51 **44**	**resinous timber**	Wood (often soft-wood) containing resinous material that has high *solvent* power for many *paint media* (even when these have partially dried) and which frequently exudes through *paint films* applied to such wood. NOTE See *bleeding.*
51 **45**	**rogue peaks**	Isolated peaks, substantially higher than the surrounding profile, usually caused by the presence of over-sized abrasive in the abrasive mixture used during *blast-cleaning* with grit abrasive.
51 **46**	**rust grade** **degree of rusting**	Classification describing the degree of rust formation on a steel surface prior to cleaning. NOTE 1 The surface may be either uncoated or coated by metallic and/or *paint coats.* NOTE 2 *Rust grades* are defined by written descriptions and representative photographic examples. See BS 7079-A1 for uncoated surfaces (rust grades A, B, C and D) and ISO 4628-3 for painted surfaces (degrees of rusting Ri 0 to Ri 5).
51 **47**	**sanding**	An abrasive process used to level a coated surface prior to the application of a further *coat* NOTE See *scuffing* and *flatting down.*
51 **48**	**scuffing**	Very light abrading with a fine abrasive paper, of a dry *coat* prior to application of a subsequent *coat.*
51 **49**	**sealant**	An organic or silicone-based material capable of providing a flexible, impermeable barrier between two surfaces.
51 **50**	**sherardizing**	A method of coating ferrous articles by heating for several hours in intimate contact with zinc dust.
51 **51**	**shot blasting**	*Abrasive blast-cleaning* using steel shot as the particulate material.
51 **52**	**solvent cleaning**	Removal of oil or grease from a surface, prior to painting, by the action of a suitable *solvent.*
51 **53**	**steam cleaning**	Removal of surface contaminants from metallic components by the action of steam jets.
51 **55**	**stripping**	The removal of old *paint, distemper* or other *coating materials* with or without the aid of *solvents* or heat.
51 **56**	**sugar soap**	A product that, after mixing with water, gives an alkaline solution used for washing down sound paintwork before over-painting.

No.	Term	Definition
51 **57**	**surface profile**	The micro-roughness of a surface, generally expressed as the average height of the major peaks relative to the major valleys. NOTE See BS 7079-C1.
51 **58**	**"Swedish" standard**	A series of representative pictorial standards published in ISO 8501-1 (equivalent to Swedish standard SIS 05 59 00) that are used to classify the condition of steel *substrates* prior to painting; the classification covers the degree of corrosion before preparative treatment (see *rust grade*), type of pretreatment and the extent of residual rust, scale and other undesirable material after pretreatment but the *hue* will vary dependent on the particulate material used in the *abrasive blast-cleaning* process.
51 **59**	**tack rag**	A fabric, impregnated with a sticky substance such as a delayed *drying varnish*, that is used to remove dust from a *substrate* after abrading and prior to further painting.
51 **60**	**vapour degreasing**	Removal of grease and oils from metallic components, by exposure to the vapour of a suitable *solvent*, prior to *pretreatment* or painting.
51 **61**	**water blasting**	Cleaning of a surface with a jet of water (with or without the assistance of compressed air) which may contain certain *additives* such as corrosion *inhibitors* and an *abrasive*.
51 **62**	**weld-through sealer**	A mastic gap-filling material that is applied, prior to welding, to an unpainted metal *substrate* for non-pressure sealing purposes and which does not prevent the making of a satisfactory weld.
51 **63**	**white rust**	Term loosely used to describe corrosion products of certain non-ferrous metals.
52 Paint application		
52 **01**	**air drying**	The *drying* of the *film* of a *coating material* by exposure to air at normal temperature.
52 **02**	**airless spraying**	The process of atomization of *paint* by forcing it hydraulically through an orifice at high pressure. NOTE Such *spraying* is often aided by the vaporization of the *solvents* especially if the *paint* has been previously heated.
52 **03**	**anodic deposition**	*Electrodeposition* carried out when the article to be coated is the anode.
52 **04**	**automatic spraying**	The application of *coating materials* by fixed or movable spray guns, operated mechanically rather than manually, often in conjunction with the movement along a conveyor of the article to be treated.
52 **05**	**brush graining**	The process of producing a *colour* variation and texture that resembles the straight grain of wood by manipulating a scumble or glaze over a painted opaque *ground* with suitable brushes (as distinct from the more imitative graining with accessory tools).
52 **06**	**cathodic deposition**	*Electrodeposition* carried out when the article to be coated is the cathode.
52 **07**	**coating voltage**	The voltage at which a *coating material* is deposited in an *electrodeposition* tank.
52 **08**	**coil-coating**	A method of applying and *stoving* the *film* of *coating material* to a coil of metal whilst it is being unwound and then rewound.

No.	Term	Definition
52 **09**	**combing**	Redistributing or partially removing a *coat* of wet *paint* with special combs in order to imitate the grain of wood or to enhance the decorative effect of a textured *coat*. NOTE The process of imitating grain may be effected only with special scumble or *graining* paints. (See also *brush graining*.)
52 **10**	**conventional spraying**	A method of *spraying* using compressed air to atomize the *coating material* and to direct it on to the *substrate* to be coated.
52 **11**	**cross-brushing** **crossing**	A method of obtaining even distribution of a wet *coating material* wherein the direction of each series of brush strokes lies at right angles to that of the previous series.
52 **12**	**current density**	The current per unit area of the article being coated by *electrodeposition*.
52 **13**	**curtain coating**	Application of *coating materials* by passing the article to be coated horizontally through a descending sheet of a continously recirculated *coating material*.
52 **14**	**cutting-in**	Application of a *coating material* by brush up to a predetermined line. NOTE An example is applying the *coating material* to the frames of windows without applying it to the glazing.
52 **15**	**dipping**	Application of a *coating material* by immersing the object to be coated and then allowing it to drain.
52 **16**	**doctor blade**	A device used in combination with thin shims for spreading on a *substrate* a thin *film* of uniform thickness.
52 **17**	**drying**	The change of a *coating material* from the liquid to the solid state, due to the evaporation of *solvent*, or physico-chemical reactions of the *binding medium*, or a combination of these processes. NOTE See *air-drying, force drying*.
52 **18**	**electrodeposition**	A method of *coating* in which an article is one of the electrodes in a tank of water-thinned *coating material*.
52 **19**	**electro-osmosis**	The process by which excess water is removed from *coating materials* that have been applied to metal *substrates* by *electrodeposition*.
52 **20**	**electron beam curing**	A process for rapidly *curing* specially formulated industrial *coating materials* by means of a concentrated stream of low-energy electrons that are electromagnetically scanned across the coated surface, producing free radicals that initiate a chain *polymerization* reaction. NOTE See also *radiation curing*.
52 **21**	**electrophoresis**	The movement of electrically charged colloidal particles when an electric current is passed through the water phase in which they are suspended. The electrode to which the particles migrate depends on their charge and hence on their composition. NOTE The phenomenon is the basis of the technique for the application of *coats* by *electrodeposition*.
52 **22**	**electrostatic detearing**	A process by which *tears* and thick edges of *coating materials* are removed from an article that has been coated by *dipping*. The dipped article is passed over a grid at a high electrical potential.
52 **23**	**electrostatic spraying**	A method of *spraying* in which an electrostatic potential difference is applied between the article to be coated and the atomized *coating material* particles whereby the latter are attracted to and deposited on it with minimal loss of *overspray*.

No.	Term	Definition
52 **24**	**fadding**	The application of *French polish* by means of a pad known as a "fad".
52 **25**	**fat edge (1)**	An accumulation of a *coating material* in the form of a ridge at the edge of a coated surface that may arise during drainage especially after *dipping*.
52 **26**	**feathering**	The operation of tapering off the edges of a patch *coat* by *laying-off* with a comparatively dry brush. NOTE This term is not to be confused with *feather edging*.
52 **27**	**filling**	The application to a defective surface of a product of suitable consistency to form, when dry, a smooth surface suitable for painting. NOTE See *filler*.
52 **28**	**flash dry**	The stage of *drying* at which most of the volatile *solvent* (or water in a *water-thinnable paint*) has evaporated and which is often characterized by a marked change in appearance. NOTE The *flash dry* stage is not necessarily related to *curing* or to the *flash-off time* allowed between *coats* or prior to *stoving*.
52 **29**	**flash-off**	The evaporation of sufficient of the *solvents* in a sprayed *coat* which is allowed to occur before proceeding either with the application of another coat or with *stoving*.
52 **31**	**flow coating** **flood coating**	The application of a *coating material* either by pouring or by allowing it to *flow* over the object to be coated, and allowing the excess to drain off.
52 **32**	**flushing**	The application of *coating material* to the interior of hollow articles by introducing the *coating material* and subsequent draining of the excess.
52 **34**	**glazing**	The enrichment or modification of a painted surface by the application of a thin, translucent coloured *coating material*.
52 **35**	**graining**	A method of imitating the grain of various kinds of wood by using semi-transparent scumble or *graining colour*. NOTE See also *brush graining, combing*.
52 **36**	**highlighting**	Emphasizing or creating the impression of relief by making certain parts of a finished surface lighter than the general *colour* of that surface. NOTE See *finish*.
52 **37**	**hot spot (1)**	Localized area of high absorbance. NOTE See also *hungry surface*.
52 **38**	**hot spot (2)**	Localized area within a *stoving* oven where the temperature is higher than intended.
52 **39**	**hot spraying**	The *spraying* of a *coating material* that has been reduced in *viscosity* by heating rather than by addition of *solvents*. By such a process it is possible to apply *coating materials* with higher *solids contents* and, therefore, obtain better *build*.
52 **40**	**hungry surface** **surface**	An abnormally absorptive surface requiring an excessive amount of *paint* to give a continuous *film*. NOTE See also *hot spot*.
52 **41**	**japanning**	An old term covering the process of finishing metal with high temperature black bituminous *stoving* material. NOTE See *black japan*.

No.	Term	Definition
52 **42**	**lap**	The zone where a *coat* of *paint* extends over an adjacent freshly applied *coat*.
52 **43**	**laying off**	The final operation in the brush application of *coating materials*, whereby unevenness in the *film* surface is reduced by light brush strokes.
52 **44**	**levelling**	The flowing out of a *coat* of wet *coating material* to give a smooth surface.
52 **45**	**marbling**	The imitating, with *coating materials*, of the appearance and texture of polished marble or other decorative stone.
52 **46**	**mixing ratio**	Of a two-pack material. The volume ratio of the two components that are blended to prepare the material for use.
52 **47**	**moisture curing**	A process by which a *film* of a *coating material* hardens upon exposure to atmospheric moisture
52 **48**	**mop polishing**	Application, to carved or turned woodwork, of a modified *French polish*, by means of a camel hair "mop".
52 **49**	**overspray**	The sprayed *coating material* that does not impinge on the surface to be coated or is misapplied to adjacent surfaces.
52 **50**	**paint harling**	A process of throwing *paint* coated granite chips on to a *tacky paint film*, previously applied to a surface, to give a thick, durable, rough-cast effect. NOTE The term sometimes describes a thick durable *finish* applied to slate roofs.
52 **51**	**paint roller**	A cylinder covered with lambswool, felt, foamed plastics, or other materials, used for applying *coating materials*.
52 **52**	**picking up (1)**	The lifting of one *coat* by another during brush application.
52 **53**	**picking up (2)**	The joining up of a wet edge.
52 **54**	**pulling over**	A process of *levelling* a cellulose or *spirit lacquer film*, usually on wood, by rubbing it with a soft fabric pad wetted with an organic liquid which is only a partial *solvent* for the *lacquer film*.
52 **55**	**radiation curing**	The drying and hardening of *coating materials* by exposure to radiant energy. Specifically the term implies activation of a chemical cure by ultraviolet radiation or electron beams. NOTE 1 Its use to include *curing* by infra-red heating is deprecated. NOTE 2 See *curing, electron beam curing*.
52 **56**	**rag rolling (1)**	The process of forming, in a scumble or *glaze coat* over a painted *ground*, a textured or variegated pattern by rolling a rag or washleather over the surface.
52 **57**	**rag rolling (2)**	Printing a pattern on a dry coated *substrate* by means of a rag or washleather charged with *colour*. The rag is crumpled in the form of a roller to produce the pattern.
52 **58**	**roller coating**	A process by which a *coating material* is applied mechanically to sheet metal that is passing between horizontal rollers, one of which is kept coated with a *film* of liquid *coating material*.
52 **59**	**scumbling**	A painting technique in which portions of a newly-applied *colour coat* are removed or textured whilst still wet, in order to expose part of the underlying *colour*. It is used to achieve a variety of *broken colour* effects.
52 **60**	**set**	The condition of a *coat* when it has dried to a state where, for all practical purposes it ceases to flow.

No.	Term	Definition
52 **61**	**shop priming**	The priming of new wood or metal components in the fabricator's factory prior to despatch. NOTE See *shop primer*.
52 **62**	**silk screen printing** **screen printing**	Method for reproducing a pattern or motif in which a screen of fine mesh (of silk or similar synthetic material) stretched on a rigid frame is partly masked to form the pattern which is reproduced on the *substrate* by forcing a suitable pigmented paste through the unmasked parts of the screen.
52 **63**	**sizing (1)**	The application of *size* to various building and decorating materials to regulate porosity before painting or applying a decorative wallcovering.
52 **64**	**sizing (2)**	In the metal decorating industry. The process of applying a thin *coat* of *varnish* to tinplate or aluminium sheet before applying *coats* of pigmented materials.
52 **65**	**spinning**	An application technique in which the *coating material* is distributed evenly over a flat *substrate* by centrifugal action. NOTE *Spinning* is mainly used for the preparation of test panels.
52 **66**	**spiriting off**	The final operation in a French polishing process by which the last traces of vegetable oil are removed by drawing a rag, dampened with methylated spirit, rapidly and repeatedly over the surface. NOTE See *French polish*.
52 **67**	**split spray**	An undesirable asymmetrical spray pattern giving rise to the application of bands of *paint* of uneven thickness.
52 **68**	**spotting in** **spot finishing**	The correction, after *flatting down*, of small defective areas in sprayed *coating materials*.
52 **69**	**spraying**	A method of application in which the atomized *coating material* is directed on to the *substrate* to be coated.
52 **70**	**starved surface**	A *substrate* that by virtue of its surface structure causes a visibly deficient *film* of a *coating material* to the extent that it is not sufficient to provide a uniform continuous *coat*.
52 **71**	**stippling (1)**	Evening out a *coat* of *paint* and removing brushmarks and other imperfections, immediately after application, by systematically dabbing the surface with a stippling brush.
52 **72**	**stippling (2)**	Producing a speckled or textured effect, either by applying spots of a different *colour* or by disturbing the surface of the *paint coat*, e.g. with a stippling brush or rubber stippler.
52 **75**	**thinning ratio**	The recommended proportion of *thinner* to be added to a *coating material* to render it suitable for a particular method of application.
52 **76**	**tumbling barrelling**	A process by which a *coating material* is applied to small articles such as paper clips, which are unsuitable for coating by other methods. The articles are placed in a drum together with slightly more *paint* than is required to coat the total surface area, and the drum is rotated until the *paint* is evenly distributed. The articles are then emptied from the drum, generally on to wire trays, and the coating air-dried or *stoved*. NOTE See *air-drying, stoving*.
52 **77**	**vacuum deposition**	The deposition on a surface, in a vacuum, by a volatilization process, of a thin *film* of metal (usually aluminium).

No.	Term	Definition
52 **78**	**wet-edge time** **wet edge** **live edge**	The period of time during which the physical condition at the boundary of the *film* of a *coating material* allows the same product to be applied to an adjacent area and to be blended imperceptibly with the existing *film*. NOTE The existing *film* is said to present a wet edge (see *lap*).
52 **79**	**wet-on-wet**	A technique whereby a further *coat* is applied before the previous one has dried, and the composite *film* then dries as a whole.
52 **80**	**wetting**	The ability a *vehicle* possesses to spread uniformly and rapidly over the surface of *pigment* particles. NOTE A *vehicle* with good *wetting* properties assists in the *dispersion* of *pigments* and improves the *wetting* ability of the finished *coating material* when it is applied to a *substrate*.
52 **81**	**whirling**	The centrifugal removal of excess *paint* from articles that have been coated by *dipping*.

6 Terms used in methods of test and analysis

60 **01**	**artificial weathering**	Laboratory tests designed to simulate but at the same time intensify and accelerate the destructive action of natural outdoor *weathering* on the *film* of a *coating material*. The tests involve exposure to artificially produced components of natural weather, e.g. light, heat, cold, water vapour, rain, which are arranged and repeated in specified cycles. There is no univerally accepted test and different investigators use different cycles. NOTE See BS 3900-F3.
60 **02**	**BET specific surface area**	The value of the *specific surface* area of a *pigment* as determined by the method of gas adsorption, developed by Brunnauer, Emmett and Teller.
60 **03**	**bend test** **mandrel test**	A test to assess the flexibility, after *drying*, of a *film* of a *coating material* applied to a flexible metal *substrate* when the latter is bent around a metal rod or a cone (mandrel) of specified dimensions and then is examined for signs of *cracking* and loss of *adhesion*. NOTE See BS 3900-E1.
60 **04**	**breakdown voltage**	The voltage required, under specified conditions, to cause the electrical failure of an *insulating varnish*.
60 **05**	**colour reduction test**	An assessment of *hue*, brightness and strength of a *colour dispersion* when mixed with a *reduction paste*. This is a comparative test against a standard *dispersion*.
60 **06**	**compatible coating materials (1)**	Two or more *coating materials* that can be mixed in given proportions without producing any undesirable effects such as precipitation, coagulation or *gelling*.
60 **07**	**compatible coating materials (2)**	Different *coating materials* that can be superimposed in *coating systems* without producing undesirable effects.
60 **08**	**contrast ratio**	The ratio of the reflectance of a *coating material* applied under specified conditions over a black *substrate* to the reflectance of the same thickness of the surface *coating material* applied over a white *substrate*. Contrast ratio is usually expressed as a fraction. NOTE See BS 3900-D4.

No.	Term	Definition
60 **09**	**cross-cut test**	A test for the *adhesion* of a *coat* in which a series of straight line cuts is made at 90° to each other through the *film* and the degree of detachment of the resultant squares of *coat* is noted. NOTE See BS 3900-E6.
60 **10**	**dielectric strength (1)** electric strength *deprecated*	The property of a non-conducting material that enables it to withstand electric stresses.
60 **11**	**dielectric strength (2)** electric strength *deprecated*	The maximum value of the electric stress that a *coating material* of given thickness will withstand without being subject to an electrical breakdown. NOTE See also *breakdown voltage*.
60 **12**	**drag (1)** **brush drag (1)**	The resistance to the brush encountered when applying a *coating material*. NOTE Excessive *drag*, i.e. *pulling*, can be a serious fault. (See also 80 30.)
60 **13**	**drying time**	The time that elapses between the application of a *coating material* to a *substrate* and the attainment of a specified stage of *drying*. NOTE See BS 3900-C2 and BS 3900-C3.
60 **14**	**durability**	The degree to which surface *coating systems* withstand the destructive effects of their environment. NOTE The destructive effects comprise weathering, mechanical, chemical and others.
60 **15**	**efflux time**	The time taken for a liquid *coating material* or a resin solution to flow through the orifice of a *flow cup*. NOTE It is often used to compare the *flow* properties of similar *coating materials*. (See BS EN 535.)
60 **16**	**evaporation rate**	The time taken for a given quantity of a volatile liquid, such as a *solvent*, to pass completely from the liquid to the vapour state under specified conditions.
60 **17**	**flash point**	The minimum temperature of a liquid at which the vapours given off are sufficient to form a flammable mixture with air, under specified conditions of test. NOTE The flash point as determined depends upon the method of test.
60 **18**	**flow cup** **efflux cup**	A cup of specified dimensions with an orifice in its base, used to measure the *flow* properties of *paints* and other liquids. NOTE 1 See BS EN 535. NOTE 2 Various types of *flow cup* are in use, e.g. Ford cup, Zahn cup.
60 **19**	**freeze-thaw stability**	The ability of an aqueous product, during storage, to withstand a number of cycles of freezing and thawing without degradation, phase separation or other deterioration.
60 **20**	**determination of hardness**	The determination of the ability of the *film* of a *coating material*, as distinct from its *substrate*, to resist cutting, indentation or penetration by a hard object. Its measured value varies according to the apparatus and method used for the determination. NOTE See BS 3900-E2, BS3900-E3 and BS 3900-E6 and also 42 27.
60 **21**	**determination of hiding power** determination of opacity, determination of obliterating power *deprecated*	The assessment of the extent to which a *coating material* obliterates the *colour* of a *substrate* of different *colour* when it is applied by a standard method. NOTE See BS 3900-D4, *contrast ratio* and also 42 **29**.
60 **22**	**impact resistance**	The ability of the *film* of a *coating material* to resist a sudden blow without *cracking* or *flaking*, as assessed by BS 3900-E3.

No.	Term	Definition
60 **23**	**iodine value**	A measure of the degree of unsaturation of an oil or resin. The mass of iodine absorbed by the sample under specified conditions, expressed as grams of iodine per 100 g sample.
60 **24**	**microclimate**	In testing *coating materials*. The conditions of temperature, humidity and light that are characteristic of any particular naturally occurring climate, which for the purpose of the test has been re-created in a given room or smaller enclosure.
60 **25**	**oil absorption value**	The number of millilitres or grams of oil, usually acid-refined *linseed oil*, used to bind a given mass of *pigment* or *extender* under specified conditions of test. The unit used should be stated. The figure is not absolute, depending on the method of determination. NOTE See BS 3483-B7.
60 **26**	**pencil hardness test**	A method for assessing the hardness of the dry *film* of a *coating material* in which pencils of increasing hardness from 4B to 6H are pushed in turn across the surface until an indentation is obtained.
60 **27**	**print resistance**	The ability of a *coating material* to resist taking on the imprint of another surface placed on it under normal conditions of practical use. NOTE *Print resistance* is assessed under specified conditions by the print-free test (see BS 3900-C8).
60 **28**	**reducing power**	The degree to which a white *pigment* reduces the strength of the *shade* produced by a coloured *pigment* under specified conditions of test. NOTE See BS 3483-A5.
60 **29**	**shelf-life**	The time during which a *coating material* will remain in good condition when stored in the original sealed containers under normal storage conditions. NOTE See *pot life*.
60 **30**	**solids content** **solids** **total solids**	The mass, expressed as a percentage of the original mass of *coating material*, which under specified conditions remains to constitute a dry *film*.
60 **31**	**soluble metal content**	The amount, usually expressed as parts per million, of heavy metals (e.g. lead) that are extracted by acids under specified conditions and method of test. NOTE See BS 3900-B6, BS 3900-B7, BS 3900-B8, BS 3900-B9 and BS 3900-B12.
60 **32**	**specific resistivity**	The electrical resistance of a conductor of the material in question having unit length and unit cross-sectional area.
60 **34**	**tinting strength** **staining power**	The degree to which a coloured *pigment* imparts *colour* to a white *pigment* under specified conditions of test. NOTE See BS 3483.
60 **35**	**volatile matter**	The substances that are released from *coating materials* by evaporation under specified conditions. NOTE See BS 3900-B2.
60 **38**	**weathering** **natural weathering**	The effects of sun, rain, frost and atmospheric pollution on *films* of *coating materials*. NOTE 1 See BS 3900-F6. NOTE 2 Natural outdoor weathering tests are normally carried out at selected exposure sites (see also *artifical weathering*).

7 Colour and colour measurement

No.	Term	Definition
70 **01**	**advancing colour**	A *colour* that gives the illusion of being closer to the eye than its complementary *colour* when both are adjacent and in the same plane. NOTE 1 *Colours* ranging from yellow-green to scarlet are in this category. NOTE 2 See also *receding colour*.
70 **02**	**assertive colour**	A *colour* that excites or stimulates attention owing to its comparative brilliance or high *saturation*.
70 **03**	**blueing**	The neutralizing of the yellow cast of certain white *pigments* or *paints* by adding a trace of blue, thereby increasing their apparent whiteness.
70 **04**	**broken colour**	The general multi-coloured effect brought about by the automatic merging of wet *paints* of various *colours* or by manipulation which produces random effects.
70 **05**	**chromaticity**	The *colour* quality of a *colour* stimulus as definable by its chromaticity coordinates, or by its dominant or complementary wavelength and its excitation purity taken together.
70 **06**	**CIE system**	The system of colorimetry prepared by the Commission Internationale d'Eclairage which defines a *colour* in terms of tristimulus values *X, Y* and *Z* representing the amounts of three defined reference primaries required to match that *colour*.
70 **07**	**colorimeter**	A device for measuring *colour*. NOTE The following main types are available: a) tristimulus instruments employing filters to simulate the three primary visual references; b) spectrophotometers in which reflectance over the whole of the visible spectrum is measured (often abridged by the use of narrow band filters). In both cases direct read-out of tristimulus information in a variety of forms can be provided (see BS 3900-D9).
70 **09**	**colour coordinates**	Numerical values characterizing the position of a *colour* in a three-dimensional representation of all *colours*. NOTE In the CIE system of 1931, they are the *XYZ* tristimulus values or Y and the *chromaticity* coordinates *x* and *y*. Later systems giving a more uniform spacing of *colours* employ different coordinates.
70 **10**	**colour difference**	An objective measurement of the difference in *colour* of two specimens determined as the distance between their *colour coordinates* in a defined *colour* space. NOTE See BS 3900-D8.
70 **11**	**colour index number (abbrev. CI number)**	The reference number in a compendium, issued by the Society of Dyers and Colorists, which includes descriptions of colorants both under generic names and under their constitution (where disclosed).
70 **12**	**colour match**	*Paints* are said to match in *colour* if under specified conditions of illumination and viewing, no significant differences in their *colour*, can be detected.
70 **13**	**colour quality**	A specification of *colour* inclusive of both *hue* and *saturation* but not luminance.
70 **14**	**colour reduction**	An assessment of *hue*, brightness and strength of a *colour dispersion* when mixed with a *reduction paste*. It is a comparison test against a standard *colour*.

No.	Term	Definition
70 **15**	**depth of shade**	That *colour* quality, in terms of both *hue* and *saturation*, but not luminance, an increase in which is associated with an increase in the quantity of colorant present, all other conditions (viewing, etc.) remaining the same.
70 **16**	**dominant wavelength**	The wavelength of pure spectral light which when mixed with white light matches the *colour* of a *coat*. NOTE For purple a negative amount of green light of a complementary wavelength is required.
70 **17**	**hue**	The attribute of a *colour* that determines whether it is red, yellow, green, blue, purple.
70 **18**	**illuminant**	The light that is emitted by a light source or that falls on a surface. NOTE The *colour* quality is defined by its spectral energy distribution.
70 **19**	**lightness**	The proportion of light which a surface reflects, irrespective of *hue* and *saturation*.
70 **20**	**mass tone**	The *colour* of the *dispersion* of a single coloured *pigment* when in an appropriate *medium*.
70 **21**	**metameric match**	A match in *colour* between *paints* under one *illuminant* but not under others. NOTE The phenomenon is termed metamerism and arises from differences in spectral reflectance distribution.
70 **22**	**receding colour**	A *colour* that gives the illusion of being further from the eye than its complementary *colour* when both are adjacent and in the same plane. NOTE 1 In this category are blues and greens. NOTE 2 See also *advancing colour*.
70 **23**	**reduction paste**	*Dispersion* of white *pigment* in the same *medium* as the coloured *pigment* under examination. NOTE The medium may be an *air-drying* alkyd, an alkyd/amino *stoving* system or an *acrylic resin*, either *thermosetting* or *thermoplastic*. For universal comparison and application, it may be more convenient to use refined linseed oil.
70 **24**	**reduction ratio**	The ratio of coloured to white *pigment* to give a particular *tint*.
70 **25**	**saturation**	The nearness in purity of a *colour* to the associated spectral *colour*. NOTE The terms chroma and intensity are also used in a similar sense.
70 **26**	**shade**	The modification of a *colour* resulting from the incorporation of a black or white *pigment*.
70 **27**	**spectral match**	A match in the *colour* of *paints* at each wavelength of the visible spectrum, i.e. their reflectances are the same. NOTE A *spectral match* holds good for all *illuminants* and observers.
70 **28**	**standard depth of shade**	An arbitrarily chosen *depth of shade* for all *hues* from which a uniform *depth of shade* may be determined for purposes of comparison. NOTE *Depth of shade* can be described as a multiple or fraction of *standard depth of shade*.
70 **29**	**standard illuminant**	A reference light of defined spectral energy distribution.
70 **30**	**tint**	The *colour* resulting from the addition to a white *coating material* of a small proportion of a *colour* paste or of stainers.
70 **31**	**undertone**	*Colour* obtained when a *pigment dispersion* is used in a very thin *film* or greatly reduced with white *pigment*. NOTE The *hue* of the *undertone* may often differ from that of the *mass tone*.

8 Paint defects

No.	Term	Definition
80 **01**	**after-tack**	A *film* defect in which the painted surface, having once reached a *tack-free* stage, subsequently develops a sticky condition. NOTE 1 The effect may be due to syneresis (i.e. expulsion of liquid from a gel) of the less polymerized oil or even of oxidation products. NOTE 2 See also *tack*.
80 **02**	**Bénard cells**	A surface phenomenon occurring during the *drying* of a *paint film* characterized by the formation of hexagon-shaped cells. The edges of the cells may show differential colour effects due to *pigment* flotation. NOTE The mechanism of cell formation has been attributed to vortex action in the *film* induced by rapid *solvent* evaporation.
80 **03**	**bittiness**	The presence of particles of gel, flocculated material or foreign matter in a *coating material* or projecting from the surface of a *film*. NOTE 1 The term "seedy" specifically denotes the presence of bits that have developed in a *coating material* during storage (see also *seediness*). NOTE 2 The term "peppery" is sometimes used when the bits are small and uniformly distributed.
80 **04**	**bleaching**	The total loss of *colour* of a *coating material*, usually, as a result of *weathering* or chemical attack.
80 **05**	**bleeding**	The process of diffusion of a soluble coloured substance from, into, or through a *coating material* from beneath, thus producing an undesirable staining or discoloration. NOTE Examples of materials which may give rise to this defect are certain types of the following classes of materials: *bituminous paints*, wood preservatives, oleo-resins from knots, *organic pigments* and *stains*.
80 **06**	**blistering**	The formation of dome-shaped projections or blisters in the dry *film* of a *coating material* by local loss of *adhesion* and lifting of the *film* from the underlying surface. NOTE Such blisters may contain liquid, vapour, gas or crystals (see BS 3900-H2).
80 **07**	**blocking**	Unwanted *adhesion* between adjacent surfaces of articles that develops when these articles are left in contact. NOTE 1 See BS 3900-C7. NOTE 2 *Blocking* is commonly encountered when coated products are stacked for storage.
80 **08**	**bloom**	A deposit resembling the bloom on a grape that sometimes forms on the *gloss film* of a *coating*, causing loss of *gloss* and dulling of *colour*.
80 **09**	**blushing**	A milky opalescence that sometimes develops as a *film* of *lacquer* dries, and is due to the deposition of moisture from the air and/or precipitation of one or more of the solid constituents of the *lacquer*; usually confined to *lacquers* that dry solely by evaporation of *solvent*.
80 **10**	**bodying (2)**	An undesirable increase in the *consistency* of a *coating material* that occurs during manufacture or subsequent storage. NOTE See also 42 **03**.
80 **11**	**bridging**	The covering over of an unfilled gap such as a crack or corner with the *film* of a *coating material*. This introduces a weakness in the *coat* that may lead to an eventual *cracking* of the dried *paint*. NOTE See also *windowing*.
80 **12**	**bronzing**	The metallic lustre seen on some weathered *coating materials* (particularly blues and reds) when viewed at near glancing angles.

No.	Term	Definition
80 **13**	**brush marks**	Ridges remaining in a dry *paint film* after brush application.
80 **14**	**bubbling**	The appearance of temporary or permanent bubbles of air or *solvent* vapour, or both in the applied *film*. NOTE This defect is not to be confused with *blistering*.
80 **15**	**chalking**	The formation of a friable, powdery layer on the surface of the *film* of a *coating material* caused by disintegration of the binding *medium* due to disruptive factors during *weathering*. NOTE *Chalking* can be considerably affected by the choice and concentration of *pigment*.
80 **16**	**checking**	*Cracking* that comprises fine cracks which do not penetrate the top *coat* and are distributed over the surface giving the semblance of a small pattern.
80 **17**	**cheesy film**	The dry *film* of a *coating material* which, although dry, is rather soft.
80 **18**	**chilling**	The effect of low temperatures on a *coating material* which is manifest in a deterioration of its normal characteristics.
80 **19**	**cissing**	The formation of small areas of the wet *film* of a *coating material* where the *coating material* has receded leaving *holidays* in the *film*.
80 **20**	**cobwebbing**	The production of fine filaments instead of the normal atomized particles when some solutions of certain classes of high molecular weight *polymer* are sprayed. NOTE 1 See spraying. NOTE 2 *Cobwebbing* may be reduced to a minimum and often virtually eliminated by careful selection of *solvents* and proper adjustment of *spraying* conditions. Although it is generally considered a defect in ordinary *lacquers*, use is made of this property to provide a protective covering for equipment, e.g. aeroplane engines, during storage. A cocoon is formed around the article by the pronounced *cobwebbing* action of *lacquers* specially prepared from certain high molecular weight *polymers*. A durable, true film-forming *lacquer* is then sprayed over the cocoon which acts as a support.
80 **21**	**cold checking**	The development of hair cracks in the *film* of a *lacquer* when it is subjected to a cold check test. NOTE An example is when a furniture *lacquer* is subjected to defined cycles of alternating cold and warm temperatures.
80 **22**	**cold cracking**	The *cracking* of the *film* of a *coating material* caused by sudden or repeated reduction in the temperature of the *film*.
80 **23**	**cracking**	Generally, the splitting of the dry *film* of a *coating material* usually as a result of *ageing*. Specifically, a breakdown in which the cracks penetrate at least one *coat* and which may be expected to result ultimately in complete failure. NOTE See *hair-cracking, checking, crazing* and *crocodiling*.
80 **24**	**cratering**	The formation of small bowl-shaped depressions in the *film* of a *coating material*.
80 **25**	**crawling**	A pronounced form of *cissing*.
80 **26**	**crazing**	*Cracking* that resembles *checking* but the cracks are deeper and broader.
80 **27**	**creeping**	The spontaneous spreading of the wet *film* of a *coating material* beyond the area to which it was applied.

No.	Term	Definition
80 **28**	**crinkling**	The development of ridges and furrows in the *film* of a *coating material* during its formation. NOTE 1 See also *wrinkling*. NOTE 2 The ridges and furrows vary in size and frequency with the composition of the *film* and conditions during *film* formation including temperature and contamination of the atmosphere.
80 **29**	**crocodiling alligatoring**	A drastic type of *crazing* producing a pattern resembling the hide of a crocodile or alligator.
80 **30**	**crowsfooting**	The development of small wrinkles in the *film* of a *coating material* which occur in a pattern resembling that of a crow's foot. NOTE See also *wrinkling*.
80 **31**	**deleafing**	Loss of *leafing* of metallic *pigments* in *paints*, giving rise to reduced metallic lustre.
80 **32**	**drag (2) brush drag (2)**	Undesirable resistance to movement of the bristles encountered when applying *paint* by brush. NOTE 1 Excessive *drag* may be a serious fault in a *coating material*. NOTE 2 See also 60 **11** and *pulling*.
80 **33**	**dry spray**	The production of a rough or slightly bitty *film* from sprayed *coating materials* where the particles are insufficiently fluid to *flow* together to form a uniform *coat*.
80 **34**	**exudation**	The emergence of oily matter on the surface of the *film* of a *coating material* after the film appears to have dried. NOTE See also *sweating*.
80 **35**	**fat edge (2)**	An unwanted accumulation of a *coating material* in the form of a ridge at the edge of a coated surface that may arise during drainage after *dipping*. NOTE See also 52 **24**.
80 **36**	**fattening**	An increase in *body* of a *coating material* on storage, not necessarily to such an extent as to make it unusable. NOTE See also *feeding, bodying*.
80 **37**	**feeding**	An increase in *body* of *coating material* on storage, to such an extent as to make it unusable except by undue *thinning*. NOTE 1 See also *fattening, bodying*. NOTE 2 The effect is generally due to chemical reaction between its constituents.
80 **38**	**filiform corrosion**	A form of corrosion under *coating materials* on metals characterized by a thread-like form advancing by means of a growing head or point.
80 **39**	**fish eyes**	Quasi-circular areas of *substrate* that are exposed through the *film* of a *coating material* and which have at their centre a source of contamination.
80 **40**	**flaking**	Lifting of the *coating materials* from the *substrate* in the form of flakes or scales.
80 **41**	**flashing**	The development of patches glossier than the general *finish* which develop in the *film* of a *coating material*, especially at joins or *laps* in the coating.
80 **42**	**floating**	In coloured *coating materials* containing mixtures of different *pigments*. The separation of one or more of the *pigments* from the others and their concentration in streaks or patches on the surface of the *film*, producing a variegated effect. NOTE See also *flooding*.
80 **43**	**flocculation**	The development of loosely coherent, *pigment agglomerates* in a *coating material*.

No.	Term	Definition
80 **44**	**flooding**	Separation of *pigment* particles in a *coating material* giving rise to a *colour* which, although uniform over the whole surface, is markedly different from that of the freshly applied wet *film*. NOTE Flooding is often considered to be an extreme form of *floating*.
80 **45**	**fugitive**	A description of colouring matter which readily suffers partial or total loss of its original *colour* on exposure to light or weather.
80 **46**	**gas checking** frosting *deprecated*	A translucent, finely wrinkled surface effect on the *film* of a *coating material* which occurs during *drying* particularly when the *film* is exposed to the fumes that arise from combustion of fuel in a gas oven. NOTE See also 42 **20**.
80 **47**	**glossing up**	The undesirable development of *gloss* on a flat *paint* due to handling or rubbing.
80 **48**	**grinning through**	The showing through of the *substrate* due to the inadequate *hiding power* of the *coating material*.
80 **49**	**hair-cracking**	*Cracking* that comprises fine cracks which may not penetrate the top *coat*; they occur erratically and at random.
80 **50**	**holidays**	A defect due to faulty application techniques seen as areas where the *film* of a *coating material* is of insufficient thickness or where there is a complete absence of *coating materials* on random areas of the *substrate*.
80 **51**	**ladders**	In paint films. A ladder-like pattern due to a miss in *laying off paint* that allows a strip of brushmarks in the opposite direction to remain undisturbed and visible.
80 **52**	**lifting**	Softening, swelling, or separation from the *substrate* of a dry *coat* as the result of the application of a subsequent *coat*.
80 **53**	**milkiness**	A whitish or translucent appearance in the normally transparent *film* of a *varnish*.
80 **54**	**mud cracking**	A network of deep cracks that form as the *film* of a *coating material* dries, especially when it has been applied to an absorbent *substrate*. *Mud cracking* is associated primarily with highly pigmented *water-borne paints*.
80 **55**	**nibs**	Small pieces of foreign matter, pieces of gelled *coating material*, coagulated *medium*, etc. which project above the surface of the *film* of a *coating material*.
80 **56**	**orange peel**	The uniform pock-marked appearance, in particular of a sprayed *film*, resembling the peel of an orange due to the failure of the *film* to flow out to a level surface. NOTE See also *spray mottle* and *pock-marking*.
80 **57**	**peeling**	The spontaneous removal in ribbons or sheets of the *film* of a *coating material* from the *substrate* due to loss of *adhesion*.
80 **58**	**pinholing**	The formation of minute holes in the wet *film* of a *coating material* that form during application and *drying* due to air or gas bubbles in the wet *film* which burst, giving rise to small craters that fail to coalesce before the *film* has *set*.
80 **59**	**pock-marking**	The formation of irregular and unsightly depressions that form during the *drying* of a *coating material*. NOTE See also *orange peel*.

No.	Term	Definition
80 **60**	**popping**	Of a *film*. The formation of eruptions in the *film* of a *coating material* after it has become partially *set* so that the craters remain in the *film*.
80 **61**	**pulling**	Excessive resistance to the movement of a brush during the application of a *coating material* due to its viscous nature. NOTE 1 See also *drag*. NOTE 2 Such a material is sometimes referred to as being "sticky under the brush".
80 **62**	**pulling up**	The softening of a *coat*, by the application of a subsequent *coat*, to such an extent that it makes brush application difficult and in extreme cases causes an objectionable intermingling of the two *coats*.
80 **63**	**rain-spotting**	*Water-spotting* caused by rain.
80 **64**	**residual tack**	The degree of stickiness remaining in the *film* of a *coating material* which, although *set*, does not reach the true *tack-free* stage.
80 **65**	**ropiness**	Pronounced brush-marks that have not flowed out because of the poor *levelling* properties of the *coating material*.
80 **66**	**run**	A narrow downward movement of a *coat* that may be caused by the collection of excess quantities of *paint* at irregularities in the surface, e.g. cracks and holes, the excess material continuing to *flow* after the surrounding surface has *set*.
80 **67**	**sagging curtaining**	A downward movement of a *coat* between application and setting, that results in an uneven area of *coat* having a thick lower edge. The resulting sag is usually restricted to a local area of a vertical surface and may have the characteristic appearance of a draped curtain.
80 **68**	**seediness**	Small resinous particles sometimes visible in a clear *varnish* or *lacquer* when examined by transmitted light. NOTE On application, varnished or lacquered surfaces may present a *bitty*, specky or sandy appearance due to this defect.
80 **69**	**sheariness**	An unintended variation in the *gloss* or *sheen* of the dry *film* of a *coating material*.
80 **70**	**silking**	Parallel microscopic irregularities left on or in the dried surface of the *film* of a *coating material* giving the appearance of silk. NOTE In *dipping* and *flow coating*, the irregularities appear in the direction of flow and in brushing in the direction of the final brush direction.
80 **71**	**sinkage**	The blotchy effect caused by *sinking-in* or the similar effect caused by softening of the underlying *undercoat*.
80 **72**	**sinking in**	Loss of *gloss* due to the absorption of the *medium* of a finishing *coat* by the *undercoat*.
80 **73**	**skinning**	The formation of a surface skin on *coating materials* in a container.
80 **74**	**sleepy**	The description of a recently applied *coating material* that has not achieved its expected *gloss* or that has become dulled or lacking in lustre other than by *bloom* formation.
80 **75**	**solvent wash**	A defect that can arise when a *coating material* is applied to the interior of containers such as drums, where the *solvent* evolved from the *coat* during *drying* then condenses on other areas of the coated surface and causes its partial, if not complete, removal.

No.	Term	Definition
80 **76**	**spotting**	The development of small areas on the *film* of a *coating material* that differ in *colour* or *gloss* from the major portion of the work. NOTE See also *water-spotting*.
80 **77**	**spray mottle**	The irregular surface of a sprayed *film* resembling the peel of an orange and caused by the inability of the paint to flow out to a level surface. NOTE See also *orange peel*.
80 **78**	**sweating (1)**	*Exudation* of oily matter from the *film* of a *coating* after the film has apparently dried.
80 **79**	**sweating (2)**	Development of *gloss* in the dry *film* of a *coat* after it has been *flatted down*. NOTE The term is often incorrectly used to describe condensation of moisture from humid atmospheres on relatively cold surfaces, e.g. walls.
80 **80**	**tacky**	The property of having a *tack*.
80 **81**	**tear**	A small *run* resembling a teardrop.
80 **82**	**tracking**	The formation of an electrically conductive path on a coated surface which may occur as a result of the presence on the surface of dirt or moisture.
80 **83**	**water-spotting**	The spotty appearance of the *film* of a *coating material*, caused by drops of water on the surface and that remains after the water has evaporated; the effect may or may not be permanent. NOTE Water spots usually appear lighter in *colour* than the surrounding *paint*.
80 **84**	**webbing**	The development of wrinkles, often in a well-defined pattern, in the *film* of a *coating material* during *drying* due to the irreversible swelling of a partially dried surface skin. NOTE *Webbing* is generally regarded as a *paint* defect but is made use of in some *paint* finishes to give a *textured coating* which obscures minor faults and indentations in the surface to be coated.
80 **85**	**whitening in the grain**	A streaky white appearance that develops in varnished or polished open-grained wood either filled or unfilled.
80 **86**	**windowing**	In *coating materials* for *dipping*. The formation of a *film* of the *coating material* across holes pierced in the component being painted.
80 **87**	**wrinkling** **rivelling**	The development of wrinkles in the *film* of a *coating material* during *drying*, usually due to the initial formation of a surface skin. NOTE See also *crinkling* and *finish*.
80 **88**	**yellowing**	The development of a yellow colour on *ageing*. NOTE *Yellowing* is most noticeable in the dried *films* of white *coating materials*.

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BS 1755, *Glossary of terms used in the plastics industry.*
BS 1755-1, *Polymer and plastics technology.*
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