



SLOVENSKI STANDARD SIST EN ISO 4618:2015

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Nadomešča:
SIST EN ISO 4618:2007

Barve in laki - Izrazi in definicije (ISO 4618:2014)

Paints and varnishes - Terms and definitions (ISO 4618:2014)

Beschichtungsstoffe - Begriffe (ISO 4618:2014)

Peintures et vernis - Termes et définitions (ISO 4618:2014)

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Ta slovenski standard je istoveten z: EN ISO 4618:2014

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ICS:

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87.040	Barve in laki	Paints and varnishes

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en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 4618

October 2014

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English Version

Paints and varnishes - Terms and definitions (ISO 4618:2014)

Peintures et vernis - Termes et définitions (ISO 4618:2014)

Einführendes Element - Haupt-Element - Ergänzendes
Element (ISO 4618:2014)

This European Standard was approved by CEN on 28 June 2014.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Contents	Page
Foreword.....	3

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[SIST EN ISO 4618:2015](https://standards.iteh.ai/catalog/standards/sist/97a50e12-8104-4038-9638-e0d16b086ba4/sist-en-iso-4618-2015)
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e0d16b086ba4/sist-en-iso-4618-2015](https://standards.iteh.ai/catalog/standards/sist/97a50e12-8104-4038-9638-e0d16b086ba4/sist-en-iso-4618-2015)

Foreword

This document (EN ISO 4618:2014) has been prepared by Technical Committee ISO/TC 35 "Paints and varnishes" in collaboration with Technical Committee CEN/TC 139 "Paints and varnishes" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2015, and conflicting national standards shall be withdrawn at the latest by April 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 4618:2006.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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[SIST EN ISO 4618:2015](#)

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INTERNATIONAL
STANDARD

ISO
4618

NORME
INTERNATIONALE

Second edition
Deuxième édition
2014-10-15

**Paints and varnishes — Terms and
definitions**

**Peintures et vernis — Termes et
définitions**

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Beschichtungsstoffe — Begriffe

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Contents	Page
Foreword	v
1 Scope	1
2 Terms and definitions	1
Annex A (informative) Alphabetical index	30
Bibliography	41

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(standards.iteh.ai)

[SIST EN ISO 4618:2015](https://standards.iteh.ai/catalog/standards/sist/97a50e12-8104-4038-9638-e0d16b086ba4/sist-en-iso-4618-2015)

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ISO 4618:2014(E/F)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information.

The committee responsible for this document is ISO/TC 35, *Paints and varnishes*.

This second edition cancels and replaces the first edition (ISO 4618:2006), which has been technically revised.

<https://standards.iteh.ai/catalog/standards/sist/97a50e12-8104-4038-9638-e0d16b086ba4/sist-en-iso-4618-2015>

The main changes are listed below.

- a) The following terms have been added: abrasion, aerosol, appearance, bubble, colour retention, dispersion, effect pigment, emulsion, functional pigment, nanoaerosol, nanocoating, nanodispersion, nanoemulsion, nanoextender, nanofilm, nano-object, nanopigment, nanoscale, nanostructured coating, nanosuspension, nanotexture, non-volatile matter by volume, overcoatability, performance, pourability (changed from flowability), reflow effect, rheopexy/rheoplectic behaviour, rust back (synonym for flash rust), rust bloom, scratch, scribe, shear-thickening flow behaviour/dilatant flow behaviour, shear-thinning flow behaviour/pseudoplastic flow behaviour, surface structure, suspension, texture, thixotropy/thixotropic behaviour, viscoelasticity, viscosity, yield point/yield stress/yield value.
- b) The following terms have been amended: adhesive strength, ageing, agglomerate, aggregate, airless spraying, anti-foaming agent, anti-fouling paint, application rate, barrier coating material, bleeding, binder, biocide, blistering (replaced by blister), blooming, brightness, chalking, coat, coating, coating material, coating process, cohesion, colour, colouring material, consistency/body, corrosion, cracking, cratering, crocodiling, crow's foot cracking, defoaming agent, de-nibbing, dirt pick-up, dirt retention, drying, durability, dyestuff, elasticity, etching, extender, feather edging, feeding, filler, filling, film, film formation, flash point, flexibility, floating, flooding, flow, flow agent, hardness, hiding power, holiday, hot spraying, hydrocarbon resin, impregnating material, in-can preservative, lap, leafing, mar resistance (changed to mar), masking, metamerism, non-volatile matter, paint, pigment, polymer dispersion, pot life, preparation grade, recoatability, resin, run, rust grade, sag, sagging, sheen, shelf life, shop primer, stopper, synthetic resin, thixotropic agent/thixotrope, varnish.
- c) The following terms have been deleted: blast primer, chromating, emulsion paint/latex paint, coverage (as synonym for hiding power), flowability (changed to pourability), hair cracking, opacity (as synonym for hiding power), high solids, miss (as synonym for holiday).

Paints and varnishes — Terms and definitions

1 Scope

This International Standard defines terms used in the field of coating materials (paints, varnishes and raw materials for paints and varnishes).

Terms relating to specific applications and properties are dealt with in standards concerning those applications and properties, e.g. corrosion protection, coating powders.

Terms on nanotechnologies are harmonized with ISO/TS 80004-4.

In addition to terms in English and French (two of the three official ISO languages), this International Standard gives the equivalent terms in German; these are published under the responsibility of the member body for Germany (DIN). However, only the terms and definitions given in the official languages can be considered as ISO terms and definitions.

NOTE 1 Those terms that are defined elsewhere in this International Standard are shown in *italics*.

NOTE 2 See also the ISO online browsing platform (OBP): <https://www.iso.org/obp/ui/>

2 Terms and definitions

2.1

abrasion

process of wearing away or deformation of a surface by friction as a result of rubbing

2.2

abrasive blast-cleaning

impingement of a high-kinetic-energy stream of an abrasive on the surface to be prepared

2.3

accelerator

additive that increases the speed of chemical reactions

2.4

acid value

number of milligrams of potassium hydroxide (KOH) required to neutralize 1 g of a sample under specified test conditions

2.5

acrylic resin

synthetic resin resulting from the polymerization or copolymerization of acrylic and/or methacrylic monomers, frequently together with other monomers

2.6

additive

any substance, added in small quantities to a *coating material*, to improve or otherwise modify one or more properties

2.7

adhesion

phenomenon of attachment at the interface between a solid surface and another material caused by molecular forces

Note 1 to entry: Adhesion should not be confused with *cohesion*.

ISO 4618:2014(E/F)

2.8

adhesive strength

force required to detach a *coating* from a *substrate* or another coating

2.9

aerosol

solid or liquid particles in dispersion in a gaseous medium

2.10

after tack

property of a *film* to remain sticky after normal drying or curing

2.11

ageing

change of one or more initial properties of a *film* during the passage of time

2.12

agglomerate

collection of weakly bound particles or aggregates or mixtures of the two where the resulting external surface area is similar to the sum of the surface areas of the individual components

Note 1 to entry: The force applied to the *aggregates/agglomerates* during the paint making process can differ, depending on the method used.

2.13

aggregate

particle comprising strongly bonded or fused particles where the resulting external surface area may be significantly smaller than the sum of calculated surface areas of the individual components

Note 1 to entry: The force applied to the *aggregates/agglomerates* during the paint making process can differ, depending on the method used.

2.14

airless spraying

process of application of *coating material* by forcing it through an orifice at high pressure without air supply

2.15

alkyd resin

synthetic resin resulting from the polycondensation of fatty acids (or oils) and carbonic acids with polyols

2.16

amino resin

synthetic resin resulting from the condensation of urea or melamine or derivatives such as benzo-guanamine with formaldehyde

Note 1 to entry: These resins are often etherified with alcohols.

2.17

anti-blocking agent

additive that usually rises to the surface during the drying process and thus prevents *blocking*

2.18

anti-foaming agent

additive that prevents foaming or reduces the foaming tendency of a *coating material*

Note 1 to entry: See also *defoaming agent*.

2.19

anti-fouling paint

coating material applied to the underwater sections of a ship's hull or to other underwater structures to discourage biological growth

2.20**anti-settling agent**

additive that prevents or retards the *settling* of *pigments* and/or *extenders* during storage of a *coating material*

2.21**anti-skinning agent**

additive that prevents or retards *skinning* caused by oxidation during storage

2.22**apparent density**

ratio of mass to volume of an untamped powder

Note 1 to entry: See also *bulk density* and *tamped density*.

2.23**appearance**

visual characteristics of a surface

Note 1 to entry: This includes *colour*, *gloss*, distinctness of image (DOI), *haze*, *surface structure*, *texture*, *orange peel*, etc.

Note 2 to entry: The word appearance has no special paint related meaning in English but is included here for clarification for non-English speakers.

2.24**application rate**

quantity of a *coating material* that is required to produce, under defined working conditions, a dry *film* or *coat* of given thickness on unit area

Note 1 to entry: It is expressed in l/m² or kg/m².

Note 2 to entry: See also *spreading rate*.

2.25**barrier coating material**

coating material used to isolate a *coating system* from the *substrate* to which it is applied, in order to prevent chemical or physical interaction, e.g. to prevent *bleeding* or migration from an underlying *coat* or substrate

Note 1 to entry: The German term "Isoliermittel" which is still currently used should be avoided, in order to prevent confusion with heat- and sound-deadening materials as well as with electrical insulators.

2.26**binder**

non-volatile part of a *medium*

2.27**biocide**

additive added to a *coating material* to prevent organisms responsible for microbiological degradation from attacking a substrate, a *coating material* or a *film* thereof

2.28**bleeding**

migration of a coloured substance from a material into another material in contact with it, which could produce an undesirable staining or discoloration

2.29**blister**

convex deformation in a *film*, arising from local detachment of one or more of the constituent *coats*

ISO 4618:2014(E/F)

2.30

blocking

unwanted *adhesion* between two surfaces, at least one of which has been coated, when they are left in contact under load after a given drying period

2.31

blooming

migration of a substance to form a deposit on the coating surface

Note 1 to entry: The substance can be a constituent of the *coating* or of the substrate to which the *coating* is applied.

2.32

blushing

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

2.33

brightness

combination of the lightness and *colour* intensity of a material

Note 1 to entry: Brightness is most commonly expressed numerically by the tristimulus value *Y*.

2.34

brittleness

condition whereby a *film* or *coat* has such poor *flexibility* that it disintegrates easily into small fragments

2.35

bronzing

change in the *colour* of the surface of a *film* giving the *appearance* of aged bronze

2.36

brush-drag

resistance encountered when applying a *coating material* by brush, related to its high-shear viscosity

2.37

bubble

closed or open spherical cavity trapped in a *paint* layer, often caused by evaporating *solvents*

2.38

bubbling

formation of temporary or permanent *bubbles* in an applied film

2.39

bulk density

ratio of mass to volume of a powder when poured gently under specified conditions

Note 1 to entry: The value of the bulk density depends to a large extent on the method of measurement used and the manner in which it is carried out.

Note 2 to entry: See also *tamped density*.

2.40

burning off

removal of a *coating* by a process in which the *film* is softened by heat and then scraped off while still soft

2.41

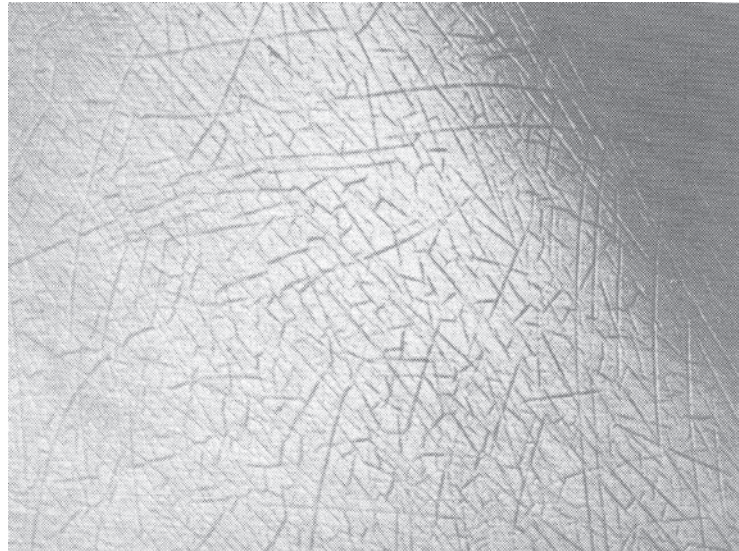
chalking

appearance of a loosely adherent powder on the surface of a *film* or *coat* arising from the degradation of one or more of its constituents

2.42 checking

form of *cracking* characterized by fine cracks distributed over the surface of a dry *film* or *coat* in a more or less regular pattern

Note 1 to entry: An example of checking is shown in [Figure 1](#).



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Figure 1 — Checking
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2.43 chemical pre-treatment

any chemical process applied to a surface prior to the application of a coating material

Note 1 to entry: See e.g. *phosphating*.

2.44 chipping

removal, in flakes, of a *coating* or rust and *mill scale* by use of hand or power tools

2.45 chlorinated rubber

polymeric material resulting from the action of chlorine on natural and/or synthetic rubber

2.46 cissing

appearance in a *film* of areas of non-uniform thickness which vary in extent and distribution

2.47 clear coating material

coating material which when applied to a *substrate* forms a solid transparent *film* having protective, decorative or specific technical properties

Note 1 to entry: See also *varnish*.

2.48 coalescing agent

additive added to a *coating material* based on a polymer dispersion to facilitate *film formation*