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Sušilniki za barve in lake (ISO/DIS 4619:2017)

Driers for paints and varnishes (ISO/DIS 4619:2017)

Trockenstoffe für Beschichtungsstoffe (ISO/DIS 4619:2017)

Siccatifs pour peintures et vernis (ISO/DIS 4619:2017)

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Paint coating equipment

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Siccatifs pour peintures et vernis

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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Descriptions	2
4.1 Solid driers	2
4.2 Liquid driers	2
4.3 Metals used	2
4.4 Acids used	2
5 Requirements and test methods	2
6 Sampling	3
7 Methods of test for solid driers	3
7.1 Appearance and consistency	3
7.2 Colour	3
7.3 Solubility (miscibility) in solvents, raw linseed oil or other drying media	4
7.4 Stability of solution	4
7.5 Suspended solid matter	4
7.6 Volatile matter	4
7.7 Acidity or basicity	4
7.7.1 Principle	4
7.7.2 Reagents	5
7.7.3 Apparatus	5
7.7.4 Preparation of the ion-exchange column	6
7.7.5 Procedure	6
7.7.6 Expression of results	7
8 Methods of test for liquid driers	7
8.1 Appearance	7
8.2 Colour	7
8.3 Solubility (miscibility) in solvents, raw linseed oil or other drying media	7
8.4 Stability of solution	8
8.5 Viscosity	8
9 Methods for determination of metal content of driers containing only one metal	8
9.1 Cobalt [ethylene diaminetetraacetic acid (EDTA) titrimetric method]	8
9.1.1 Reagents	8
9.1.2 Procedure	10
9.1.3 Expression of results	10
9.2 Manganese (EDTA titrimetric method)	10
9.2.1 Reagents	10
9.2.2 Procedure	10
9.2.3 Expression of results	11
9.3 Lead (EDTA titrimetric method)	11
9.3.1 Reagents	11
9.3.2 Procedure	11
9.3.3 Expression of results	12
9.4 Zinc (EDTA titrimetric method)	12
9.4.1 Reagents	12
9.4.2 Procedure	12
9.4.3 Expression of results	12
9.5 Calcium (EDTA titrimetric method)	13
9.5.1 Reagents	13
9.5.2 Procedure	13

ISO/DIS 4619:2017(E)

9.5.3	Expression of results	13
9.6	Iron (iodometric method)	14
9.6.1	Principle	14
9.6.2	Reagents	14
9.6.3	Procedure	15
9.6.4	Expression of results	15
9.7	Zirconium (EDTA titrimetric method)	15
9.7.1	Reagents	15
9.7.2	Procedure	16
9.7.3	Expression of results	16
9.8	Barium	16
9.8.1	Method A (gravimetric method)	16
9.8.2	Method B (acidimetric method)	17
10	Methods for determination of metal contents of mixed driers	19
11	Test report	19
	Bibliography	20

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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).

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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 World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

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

This third edition cancels and replaces the second edition (ISO 4619:1998), which has been technically revised. The main changes are:

- a) the concentration of phenolphthalein indicator solution in [7.7.2.6](#) has been reduced to 0,5 % following actual requirements;
- b) the text has been editorially revised;
- c) the normative references have been updated.

Driers for paints and varnishes

1 Scope

This International Standard specifies the requirements and the corresponding test methods for driers for paints, varnishes and related products. The requirements relate to driers in the solid or liquid form.

NOTE Emulsifiable driers are also available, but no requirements for this type are given in this International Standard.

CAUTION — The procedures described in this International Standard are intended to be carried out by qualified chemist or by other suitably trained and/or supervised personnel. The substances and procedures used in this method may be injurious to health if adequate precautions are not taken. This International Standard refers only to its technical suitability and does not absolve the user from statutory obligations relating to health and safety.

Attention is particularly drawn to the health hazards of heavy metals which may be a constituent of driers (e.g. cobalt, lead, cerium, zirconium, vanadium; see [Clauses 3, 4 and 8](#)).

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1523, *Determination of flash point — Closed cup equilibrium method*

ISO 2811-1, *Paints and varnishes — Determination of density — Part 1: Pycnometer method*

ISO 2431, *Paints and varnishes — Determination of flow time by use of flow cups*

ISO 2592, *Petroleum and related products — Determination of flash and fire points — Cleveland open cup method*

ISO 3219, *Plastics — Polymers/resins in the liquid state or as emulsions or dispersions — Determination of viscosity using a rotational viscometer with defined shear rate*

ISO 3251, *Paints, varnishes and plastics — Determination of non-volatile-matter content*

ISO 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 4618, *Paints and varnishes — Terms and definitions*

ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4618 and the following apply.

3.1

drier

compound, usually a metallic soap, that is added to products drying by oxidation in order to accelerate this process

ISO/DIS 4619:2017(E)

4 Descriptions

4.1 Solid driers

Solid driers are materials which may be manufactured in a hard, soft (highly viscous) or powder form.

4.2 Liquid driers

Liquid driers are materials which are supplied as solutions in organic solvents, usually white spirit.

All these types of drier, when dissolved in solvents (normally hydrocarbons), impart specific drying properties depending on the metal used.

4.3 Metals used

The following metals are normally used: cobalt, manganese, lead, zinc, calcium, cerium (or other rare earths), iron, zirconium, vanadium, barium, aluminium, strontium, etc.

NOTE In this International Standard, methods for determination of metal content are given only for those metals which are in common use.

4.4 Acids used

The following acids are used: fatty acids of linseed oils, tall-oil fatty acids, resinic acids, naphthenic acids, 2-ethylhexanoic acid, fatty iso-acids with 9 carbon atoms, other fatty acids with 9 to 11 carbon atoms, etc.

5 Requirements and test methods

5.1 Driers for paints shall comply with the requirement given in [Table 1](#).

Table 1 — Requirements and test methods

Characteristic		Requirement	Test method	
			Solid driers	Liquid driers
Appearance		Clear and uniform; no suspended matter or sediment	Subclause 7.1	Subclause 8.1
Consistency, if required		As agreed between the interested parties	To be agreed between the interested parties	—
Colour		As agreed between the interested parties	Subclause 7.2	Subclause 8.2
Solubility (miscibility) in solvent, raw linseed oil and other drying media		No separation or deposit	Subclause 7.3	Subclause 8.3
Stability of solution		Clear solution; no clouding, gelation or sedimentation	Subclause 7.4	Subclause 8.4
Suspended solid mater	of liquid driers % (by mass)	max. 0,1	—	Subclause 7.5
	of solid driers	As agreed between the interested parties	Subclause 7.5	—
a Tolerance (absolute value) on the metal content declared or agreed.				