

INTERNATIONAL
STANDARD

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**Zinc dust pigments for paints —
Specifications and test methods**

*Pigments à base de poussière de zinc pour peintures — Spécifications
et méthodes d'essai*



Reference number
ISO 3549:1995(E)

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 3549 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 2, *Pigments and extenders*.

This second edition cancels and replaces the first edition (ISO 3549:1976), which has been technically revised.

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Zinc dust pigments for paints — Specifications and test methods

1 Scope

This International Standard specifies the requirements and corresponding test methods for zinc dust pigments suitable for use in protective coatings.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 565:1990, *Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings.*

ISO 594-1:1986, *Conical fittings with a 6° (Luer) taper for syringes, needles and certain other medical equipment — Part 1: General requirements.*

ISO 842:1984, *Raw materials for paints and varnishes — Sampling.*

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods.*

3 Definition

For the purposes of this International Standard, the following definition applies.

3.1 zinc dust pigment: A fine grey powder of essentially spheroidal particles, mainly consisting of metallic zinc.

NOTE 1 Zinc dust pigments for paints may vary in their metallic zinc content, chemical purity, particle shape, particle size distribution, mean and maximum diameter, etc. These variations are all likely to have an influence on the zinc dust behaviour in paints with regard to parameters such as dispersibility, fineness of grind, reactivity, electrical conductivity and packing properties.

4 Required characteristics and tolerances

4.1 For zinc dust pigments complying with this International Standard, the essential requirements are specified in tables 1 and 2.

Table 1 — Composition of zinc dust pigment

Characteristic	Unit	Requirement	Test method
Total zinc content	% (m/m)	min. 98	See clause 7
Metallic zinc content	% (m/m)	min. 94	See clause 8
Lead (Pb) content	% (m/m)	max. 0,2	See clause 9
Cadmium (Cd) content	% (m/m)	max. 0,1	See clause 9
Iron (Fe) content	% (m/m)	max. 0,05	See clause 9
Arsenic (As) content	% (m/m)	max. 0,000 5	See clause 10
Chloride (Cl) content)	% (m/m)	max. 0,005	See clause 11
Matter insoluble in acid	% (m/m)	max. 0,05	See clause 12

NOTE — If the zinc oxide content is required, this can be calculated by multiplying the difference between the total zinc content and the metallic zinc content by 1,244 7.