

# INTERNATIONAL STANDARD

**ISO**  
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## **Zinc phosphate pigments for paints — Specifications and methods of test**

*Pigments de phosphate de zinc pour peintures — Spécifications et  
méthodes d'essai*



Reference number  
ISO 6745:1990(E)

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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.

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 6745 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*.

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## Zinc phosphate pigments for paints — Specifications and methods of test

### 1 Scope

This International Standard specifies the requirements and the corresponding methods of test for zinc phosphate pigments suitable for use in corrosion-inhibiting paints.

### 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 385-1:1984, *Laboratory glassware — Burettes — Part 1: General requirements.*

ISO 648:1977, *Laboratory glassware — One-mark pipettes.*

ISO 787-5:1980, *General methods of test for pigments and extenders — Part 5: Determination of oil absorption value.*

ISO 787-7:1981, *General methods of test for pigments and extenders — Part 7: Determination of residue on sieve — Water method — Manual procedure.*

ISO 787-9:1981, *General methods of test for pigments and extenders — Part 9: Determination of pH value of an aqueous suspension.*

ISO 787-10:1981, *General methods of test for pigments and extenders — Part 10: Determination of density — Pycnometer method.*

ISO 787-14:1973, *General methods of test for pigments — Part 14: Determination of resistivity of*

*aqueous extract (Printed together with Part 13 and Part 17).*

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

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

ISO 4793:1980, *Laboratory sintered (fritted) filters — Porosity grading, classification and designation.*

### 3 Definition

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

**zinc phosphate pigment:** A white corrosion-inhibiting pigment consisting either predominantly of zinc phosphate dihydrate [ $Zn_3(PO_4)_2 \cdot 2H_2O$ ] or of a mixture of zinc phosphate dihydrate and zinc phosphate tetrahydrate [ $Zn_3(PO_4)_2 \cdot 4H_2O$ ] or predominantly of zinc phosphate tetrahydrate, and free from extenders and other pigments.

### 4 Classification

In this International Standard, zinc phosphate pigments are classified as one of the following three types:

**Type 1:** consisting predominantly of zinc phosphate dihydrate and exhibiting a loss on ignition at 600 °C of greater than 8,5 % (*m/m*) but less than or equal to 10,0 % (*m/m*).

**Type 2:** consisting essentially of a mixture of zinc phosphate dihydrate and zinc phosphate tetrahydrate and exhibiting a loss on ignition at 600 °C of greater than 10,0 % (*m/m*) but less than or equal to 13,0 % (*m/m*).

**Type 3:** consisting predominantly of zinc phosphate tetrahydrate and exhibiting a loss on ignition at