
INTERNATIONAL STANDARD



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Aluminium pigments for paints

Pigments d'aluminium pour peintures

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, International Standard ISO 1247 replaces ISO Recommendation R 1247-1971 drawn up by Technical Committee ISO/TC 35, *Paints and varnishes*.

The Member Bodies of the following countries approved the Recommendation :

Austria	Iran	South Africa, Rep. of
Brazil	Israel	Spain
Chile	Italy	Sweden
Denmark	Netherlands	Switzerland
Egypt, Arab Rep. of	New Zealand	Turkey
Germany	Peru	United Kingdom
Greece	Poland	U.S.S.R.
India	Portugal	

The Member Body of the following country expressed disapproval of the Recommendation on technical grounds :

France*

* Subsequently, this Member Body approved the Recommendation.

Aluminium pigments for paints

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the requirements and corresponding test methods for aluminium pigments suitable for use in paints including

- a) general purpose, decorative and protective paints, and
- b) speciality finishing paints.

2 REFERENCES

ISO/R 760, *Determination of water by the Karl Fischer method.*

ISO 787, *General methods of test for pigments.*

ISO 793, *Aluminium and aluminium alloys — Determination of iron — Orthophenanthroline photometric method.*

ISO/R 795, *Chemical analysis of aluminium and its alloys — Photometric determination of copper (Oxaldehydrazide method applicable to copper content between 0,002 and 0,8 %).*

ISO/R 798, *Chemical analysis of aluminium and its alloys — Gravimetric determination of zinc in aluminium alloys (Zinc content between 0,50 and 6,5 %).*

ISO 808, *Aluminium and aluminium alloys — Determination of silicon — Spectrophotometric method with the reduced silicomolybdic complex.*

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

ISO 886, *Aluminium and aluminium alloys — Determination of manganese — Photometric method (Manganese content between 0,005 and 1,5 %).*

ISO 1250, *Mineral solvents for paints — White spirits and related hydrocarbon solvents.*

3 DESCRIPTION

Aluminium pigments are composed of finely divided aluminium metal. The particles of aluminium metal are lamellar in shape when examined microscopically. The material may be in the form of a powder or a paste and have leafing or non-leafing characteristics.

NOTE — Mica and other adulterants shall be absent. If, on solution of the sample in hydrochloric acid as described in 15.3.3, a non-fatty residue is obtained, the residue shall be examined.

4 CLASSIFICATION

4.1 Types

This International Standard covers four types of aluminium pigments, as follows :

- type 1 : aluminium powder, leafing
- type 2 : aluminium paste, leafing
- type 3 : aluminium powder, non-leafing
- type 4 : aluminium paste, non-leafing

4.2 Classes

Pigments of types 1 and 2 are further classified by their water-covering capacity as shown in table 1.

TABLE 1 — Classes of types 1 and 2

Type	Class	Water-covering capacity
		m ² /g
1	a	up to 0,8
	b	over 0,8 up to 1,5
	c	over 1,5 up to 2,2
	d	over 2,2
2	p	up to 1,7
	q	over 1,7 up to 2,4
	r	over 2,4

NOTE — Attention is drawn to the reproducibility limits given in 11.8.

5 REQUIRED CHARACTERISTICS AND THEIR TOLERANCES

The material shall have the characteristics given in the appropriate column of table 2.

The liquid contained in paste pigment shall be category A mineral solvent complying with ISO 1250, or other appropriate liquid as may be agreed between the interested parties.