
**Conversion coatings on metallic
materials — Determination of coating mass
per unit area — Gravimetric methods**

*Couches de conversion sur matériaux métalliques — Détermination de la
masse de revêtement par unité de surface — Méthodes gravimétriques*



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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.

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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.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 3892 was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*, Subcommittee SC 2, *Methods of inspection and coordination of test methods*.

This second edition cancels and replaces the first edition (ISO 3892:1980), which has been technically revised.

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WARNING — The materials, operations and equipment listed in this International Standard may be hazardous if suitable precautions are not observed. This International Standard does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this International Standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

1 Scope

This International Standard specifies gravimetric methods for determining the coating mass per unit area of conversion coatings on metallic materials.

The methods are applicable to

- phosphate coatings on iron and steel;
- phosphate coatings on zinc and cadmium;
- phosphate coatings on aluminium and its alloys;
- chromate coatings on zinc and cadmium;
- chromate coatings on aluminium and its alloys.

The methods are applicable only to conversion coatings that are free from any supplementary coating such as oil, water or solvent-based polymers, or wax.

The methods do not indicate the presence of bare spots or sites with thicknesses lower than the specified minimum in the measuring areas. In addition, the single values obtained from each measuring area is the mean thicknesses over that area. There can be no further mathematical analysis of this single value, e.g. for statistical control purposes.

2 Apparatus

2.1 Vessel, of glass or other appropriate material, in which the conversion coatings can be dissolved.

2.2 Analytical balance, capable of weighing to the nearest 0,1 mg, for weighing the test pieces under examination before and after dissolution of the conversion coatings.

2.3 Electrical equipment, for electrolytic dissolution (for chromate coatings on zinc and cadmium).