
**Zinc coatings — Guidelines and
recommendations for the protection
against corrosion of iron and steel in
structures —**

**Part 3:
Sherardizing**

*Revêtements de zinc — Lignes directrices et recommandations
pour la protection contre la corrosion du fer et de l'acier dans les
constructions —*

Partie 3: Shérardisation

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Foreword

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This document was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*, Subcommittee SC 4, *Hot dip coatings (galvanized, etc.)*.

This second edition cancels and replaces the first edition (ISO 14713-3:2009), of which it constitutes a minor revision following the publication of ISO 17668 with the following changes:

- ISO 17668 has replaced EN 13811;
- [Table 1](#) has been amended to align coating classes with ISO 17668.

A list of all parts in the ISO 14713 series can be found on the ISO website.

Introduction

Sherardizing is a thermal diffusion process in which articles are heated in the presence of a sherardizing mixture consisting of zinc dust with or without an inert material.

The process is carried out in a slowly rotating closed container at temperatures ranging from about 300 °C to 500 °C. The normal processing temperature is below the melting point of zinc (419 °C).

During the process, zinc/iron alloys are built up on the surface of the ferrous articles. A coating thickness of 10 µm to 75 µm (and higher if required) can be achieved. The coating thickness is accurately controlled by the amount of zinc dust, the processing time and temperature. The coating closely follows the contours of the basis material, and uniform coatings are produced on articles, including those of irregular shape.

After sherardizing, the containers are cooled down. A screening process separates the sherardized articles from the unused sherardizing mixture. The articles, with the zinc/iron-alloyed layer, are normally post-treated by phosphating, chromating or another suitable passivation process (conversion coating) resulting in a dust-free and clean passivated surface.

Most steel and iron articles can be sherardized.

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