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## **Metallic and other inorganic coatings — Electrodeposited zinc alloys with nickel, cobalt or iron**

*Revêtements métalliques et autres revêtements inorganiques — Dépôts électrolytiques d'alliages de zinc au nickel, cobalt ou fer*



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## Foreword

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The main task of technical committees is to prepare International Standards. 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.

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ISO 15726 was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*, Subcommittee SC 3, *Electrodeposited coatings and related finishes*.

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## Introduction

Electrodeposited zinc alloy coatings containing nickel, cobalt or iron are significantly more corrosion-resistant than electrodeposited zinc coatings of equivalent thickness. The alloy coatings are anodic to steel, but less so than pure zinc. Although originally developed for the continuous coating of steel for the fabrication of automobile body panels, zinc alloy electroplating processes have become available that are suitable for the rack and barrel electroplating of individual components.

In the case of zinc-nickel alloys, proprietary acid and alkaline electroplating processes exist that yield deposits with controlled nickel contents. Zinc-nickel coatings containing either 8 % or 12 % nickel are most widely used, and are often considered possible substitutes for cadmium coatings. Zinc-nickel alloy coatings can reportedly be applied by brush electroplating techniques.

The alloy coatings are often used in combination with chromate conversion coatings, organic sealants and other supplementary treatments to further enhance corrosion resistance, and often serve as the base for applying organic coatings. Chromate conversion coatings formulated specifically for use with zinc-cobalt and zinc-nickel alloy coatings are available for producing yellow- to bronze-coloured surfaces.