



**International
Standard**

ISO 25164

**Physical vapor deposition
coatings — Magnetron sputtering
deposition of TiAlSiN thin films —
Specification**

*Revêtements obtenus par dépôt physique en phase vapeur —
Dépôt de couches minces de TiAlSiN par pulvérisation cathodique
magnétron — Spécification*

**First edition
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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

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Introduction

TiAlSiN films have properties such as high hardness, wear resistance, corrosion resistance and high-temperature oxidation resistance. These characteristics significantly enhance the performance, durability and value of products. Consequently, TiAlSiN films have gained widespread industrial attention in cutting tool processing fields, e.g. automobiles, aerospace and general machinery.

Magnetron sputtering is a preferred deposition technique for TiAlSiN films onto cemented carbide substrates. This method provides several advantages, including rapid deposition rate, low substrate temperature, minimal film damage, reduced stress, improved film-substrate integration, high purity, excellent compactness and uniform film thickness. These characteristics make magnetron sputtering well-suited for industrial-scale production of TiAlSiN coatings on large-area substrates.

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