
**Anodizing of aluminium and its
alloys — Test method for chemical
resistance of anodic oxidation
coatings on aluminium and its alloys
using electromotive force apparatus**

*Anodisation de l'aluminium et de ses alliages — Méthode d'essai
pour la résistance chimique des couches d'oxydation anodique
sur l'aluminium et ses alliages à l'aide d'un appareil à force
électromotrice*

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Foreword

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This document was prepared by Technical Committee ISO/TC 79, *Light metals and their alloys*, Subcommittee SC 2, *Organic and anodic oxidation coatings on aluminium*.

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Introduction

Anodic oxidation coatings can be exposed to various chemicals and attacked by chemical means. The resistance of anodic oxidation coatings to chemicals can give important information about how the characteristics of the coatings are affected by anodizing conditions, especially sealing conditions.

The test given in this document evaluates resistance to alkali or acid by measuring the dissolving time of anodic oxidation coatings. This method can test the chemical resistance characteristics of the whole thickness of the coatings.

This test method for chemical resistance using electromotive force apparatus has positive characteristics, such as a simplified testing apparatus, the reduction of artificial errors and applicability to thick anodic oxidation coatings over 20 μm . This test method is characterized by its small test area, the small quantity of test liquid used and a short testing time. In addition, both the test solutions can be supported by the same apparatus.

This method specified in this document uses sodium hydroxide or phosphoric acid, but it is possible to use other chemicals in accordance with the use environment. Therefore, this method can be widely applicable to anodic oxidation coatings for industrial products, electrical appliances or kitchenware.

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