ISO 11894-1:2013-04 (E)

Fine ceramics (advanced ceramics, advanced technical ceramics) - Test method for conductivity measurement of ion-cond uctive fine ceramics - Part 1: Oxide-ion-conducting solid electrolytes

Contents

Page

Foreword iv

1 Scope 1

2 Normative references 1

3 Terms and definitions 1

4 Symbols 2

5 Test piece 3
5.1 Shape and dimensions 3
5.2 Surface roughness 3
5.3 Density 3
5.4 Electrodes 3
5.5 Number of test piece 4

6 Test procedure 4
6.1 Measurement of cross-sectional area of a test-piece and the distance between voltage terminals 4
6.2 Conditions of testing 4
6.3 Heating of a test piece 4
6.4 Method for measurement 4
6.5 Measurement system 5
6.6 AC impedance meter 6
6.7 Lead wires 6
6.8 Preparation for measurement 7

7 Measurement 7

8 Calculation of oxide ion conductivity 7

9 Expression of oxide ion conductivity 8
9.1 Oxide ion conductivity 8
9.2 The expression of oxide ion conductivity 8

10 Test report 8