
**Fine ceramics (advanced ceramics,
advanced technical ceramics) —
Determination of drying loss of
ceramic granules**

*Céramiques techniques — Détermination de la perte au séchage des
granulés de céramique*



This document is a preview generated by EMS



COPYRIGHT PROTECTED DOCUMENT

© ISO 2014

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

	Page
Foreword	iv
1 Scope	1
2 Principle	1
3 Apparatus	1
3.1 Drying oven.....	1
3.2 Moisture analyser.....	1
4 Sampling	1
5 Procedure	2
5.1 Procedure 1: Drying oven.....	2
5.2 Procedure 2: Moisture analyser.....	2
6 Calculation	3
7 Test report	3

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 206, *Fine ceramics*.

Fine ceramics (advanced ceramics, advanced technical ceramics) — Determination of drying loss of ceramic granules

1 Scope

This International Standard specifies the testing method to determine the drying loss of granulated ceramic powders. The drying loss of granulated ceramic powders means the loss of mass that occurs from drying under specified conditions.

2 Principle

Granulated ceramic powders may contain water, solvent, organic additives, and other volatile matters. Because water, solvent, and, to some extent, also organic additives are removed from granulated powders by drying at high temperature, a mass loss occurs after drying under specified conditions. The mass loss of granulated ceramic powder divided by its initial mass gives its drying loss in percentage by mass.

3 Apparatus

3.1 Drying oven

A drying oven capable of maintaining temperatures up to 110 °C with a precision of ± 5 °C and circulating air in oven. The type of oven shall be stated in the test report, as the design of the oven can influence the test result.

3.1.1 Flat-bottomed dish

A flat-bottomed metallic dish (for example, tin or aluminium), approximately 50 mm in diameter and 30 mm in height. The dimensions of the dish are not critical, but the base should be flat to ensure good thermal contact and to permit the test portion of the powder to be spread to a thin, even layer (the thickness of powder can have a significant influence on the test result).

3.1.2 Balance

A balance capable of weighing at least 10 g with a precision of $\pm 0,001$ g (1 mg).

3.1.3 Desiccator

A desiccator containing a desiccant such as dried calcium chloride impregnated with cobalt chloride.

3.2 Moisture analyser

A moisture analyser with a precision of $\pm 0,001$ g (1 mg) that has a halogen or infrared heating source (instead of the apparatus described in [3.1](#)).

4 Sampling

4.1 The granulated ceramic powder should be tested in the as-received condition.