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## **Rigid cellular plastics — Determination of the volume percentage of open cells and of closed cells**

*Plastiques alvéolaires rigides — Détermination du pourcentage volumique de cellules ouvertes et de cellules fermées*



Reference number  
ISO 4590:2016(E)

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## Foreword

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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](http://www.iso.org/directives)).

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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 61, *Plastics*, Subcommittee SC 10, *Cellular plastics*.

This third edition cancels and replaces the second edition (ISO 4590:2002), which has been technically revised with the following changes:

- changes on [Clause 2](#);
- introduction of a new test method based on the variation of the volume which is named 2b and is explained under [9.5](#) to [9.7](#);
- references to the test methods have been revised consequently and the cross references;
- some editorial updates have been introduced.

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## Introduction

The method 2b is included in order to update the basics of the method with the modern apparatus. This International Standard kept the same measurement equipment since the first version of 1981 and new test equipment has been included in accordance with the technical advances. The equipment, its performance and calibration, and the calculation of the new method are described in [9.5](#) to [9.9](#).