

INTERNATIONAL
STANDARD
ISO

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Third edition
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Borosilicate glass 3.3 — Properties

Verre borosilicaté 3.3 — Propriétés



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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 3585 was prepared by Technical Committee ISO/TC 48, *Laboratory glassware and related apparatus*, Subcommittee 5, *Quality of glassware*.

This third edition cancels and replaces the second edition (ISO 3585:1991), which has been technically revised.

Annex A of this International Standard is for information only.

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Introduction

It is the purpose of this International Standard to define and facilitate the identification of a type of glass appropriate for laboratory glassware, glass plant, pipeline and fittings.

The design of glass components is dependent on the coefficient of mean linear thermal expansion and the ultimate tensile strength. Utilization requires not only a product design which is satisfactory within temperature and pressure limitations, but one which will also satisfy certain criteria for chemical resistance.

Therefore, the glass, as distinct from the components made from it, shall satisfy certain specified requirements. However, it is accepted that methods of working the glass to achieve the various forms required in practice can affect the properties of the glass.

The glass used for this application, referred to as "borosilicate glass 3.3", is resistant to both heat and chemicals. Its heat resistance characteristics are defined by the nominal values given for physical properties. Its chemical resistance characteristics are specified within stated limits, using standard test methods to which reference is made in this International Standard.

The glass is deemed to be satisfactory for the construction of laboratory glassware, glass plant, pipeline and fittings, while for the glass components themselves, other relevant International Standards should be consulted.

Where nominal properties are given, they relate, unless otherwise specified, to the range of temperatures of 20 °C to 300 °C. However, this does not imply that products manufactured from this glass can necessarily be used freely within this range, nor that they cannot be used outside this range.