

This is a preview of "ISO 10298:2010". [Click here to purchase the full version from the ANSI store.](#)

Second edition  
2010-05-15

---

---

## Determination of toxicity of a gas or gas mixture

*Détermination de la toxicité d'un gaz ou d'un mélange de gaz*



Reference number  
ISO 10298:2010(E)

© ISO 2010

This is a preview of "ISO 10298:2010". [Click here to purchase the full version from the ANSI store.](#)

**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2010

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing 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](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

This is a preview of "ISO 10298:2010". [Click here to purchase the full version from the ANSI store.](#)

## Contents

Page

Foreword .....	iv
Introduction.....	v
1 Scope .....	1
2 Terms and definitions .....	1
3 Determination of toxicity .....	2
3.1 General .....	2
3.2 Test method .....	2
3.3 Calculation method .....	2
Annex A (informative) LC <sub>50</sub> values for toxic gases and toxic vapours used in gas mixtures .....	3
Annex B (informative) Selection of an LC <sub>50</sub> value for a particular gas .....	7
Bibliography.....	10

## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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.

ISO 10298 was prepared by Technical Committee ISO/TC 58, *Gas cylinders*, Subcommittee SC 2, *Cylinder fittings*.

This second edition cancels and replaces the first edition (ISO 10298:1995), which has been technically revised.

This is a preview of "ISO 10298:2010". [Click here to purchase the full version from the ANSI store.](#)

## Introduction

ISO 5145 "*Cylinder valve outlets for gases and gas mixtures — Selection and dimensioning*" and similar standards establish practical criteria for the determination of outlet connections of cylinder valves. These criteria are based on certain physical and chemical properties of the gases, in particular, the acute toxicity of the gases.

One of the difficulties in the application of ISO 5145 resides in the fact that, in the case of single components, there are abundant data in the literature (although differences may be found, depending upon the test methods employed), but in the case of gas mixtures, data in the literature are often incomplete or even non-existent.

The aim of this International Standard is to eliminate the ambiguities in the case of differences in the literature, to supplement existing data and to give a calculation method for gas mixtures.

Since the publication of the first edition of ISO 10298, this International Standard has been used for other purposes than the selection of cylinder valve outlets, e.g. providing toxicity data for the classification of gas and gas mixtures according to the international transport regulations and dangerous substances regulations, which since 2003 is under the umbrella of the Globally Harmonized System (GHS).