



**International
Standard**

ISO 4764

**Plastics — Polyols for use in the
production of polyurethanes
— Determination of degree of
unsaturation by using iodine method**

*Plastiques — Polyols pour la production des polyuréthanes —
Détermination du degré de non-saturation par la méthode à l'iode*

**First edition
2024-09**

Reference number
ISO 4764:2024(en)

Full document details: [ISO 4764-2024](#)

© ISO 2024  **Documents**
Document Sharing Hub



COPYRIGHT PROTECTED DOCUMENT

© ISO 2024

All rights reserved. Unless otherwise specified, or required in the context of its implementation, 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
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	1
5 Solvents and reagents	2
5.1 Solvents	2
5.2 Reagents	2
5.2.1 Wijs reagent	2
5.2.2 0,1 N sodium thiosulfate solution	2
5.2.3 KI solution	3
5.2.4 Starch indicator	3
6 Apparatus	3
7 Procedure	3
8 Correction	4
9 Degree of unsaturation after correction	4
10 Precision and bias	5
11 Test report	5
Annex A (informative) Correction of effect by additives	6
Annex B (informative) Experimental results using conventional polyols	7
Annex C (informative) Effect of differences of solvent	8
Bibliography	9

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 document 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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 12, *Thermosetting materials*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Conventionally, a titration method using mercuric acetate (see ISO 17710) has been used as a method for measuring a polyether polyol for polyurethanes. However, in recent years, the treatment of mercury waste liquid associated with analysis has become a global problem.

This document formulates a measurement method to replace the mercuric acetate method.