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**Plastics — Thermoplastic  
polyurethanes for moulding and  
extrusion —**

Part 3:  
**Distinction between ether and ester  
polyurethanes by determination of the  
ester group content**

*Plastiques — Polyuréthannes thermoplastiques pour moulage et  
extrusion —*

*Partie 3: Distinction entre polyuréthannes éther et ester par dosage  
des groupements esters*

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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 9, *Thermoplastic materials*.

ISO 16365 consists of the following parts, under the general title *Plastics — Thermoplastic polyurethanes for moulding and extrusion*:

- *Part 1: Designation system and basis for specifications*
- *Part 2: Preparation of test specimens and determination of properties*
- *Part 3: Distinction between ether and ester polyurethanes by determination of the ester group content*

## Introduction

The saponification value is a fast and easy determination method to distinguish between polyesterol and polyetherol-based thermoplastic polyurethanes. However, the saponification value strongly depends on the reaction conditions. Higher saponification values result in longer hydroxylation times and/or higher temperatures. With this procedure, the theoretically expected values have been found.

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