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## Plastics — Determination of Izod impact strength

*Plastiques — Détermination de la résistance au choc Izod*



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

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This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 2, *Mechanical behavior*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 249, *Plastics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fifth edition cancels and replaces the fourth edition (ISO 180:2019), which has been technically revised.

The main changes are as follows:

- results of an interlaboratory test for unnotched specimens (see [Annex A](#)) have been added;
- reference to standard ISO 16012 (see the Bibliography and [5.2](#)) has been added;
- symbols used in [Formulae \(1\)](#) and [\(2\)](#) have been reviewed and updated;
- method designation in [Clause 10](#) b) have been reviewed and updated.

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](http://www.iso.org/members.html).

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## Introduction

The Izod impact strength determination method is suitable for use with the following range of materials:

- rigid thermoplastic moulding and extrusion materials, including filled and reinforced compounds in addition to unfilled types; rigid thermoplastics sheets;
- rigid thermosetting moulding materials, including filled and reinforced compounds; rigid thermosetting sheets, including laminates;
- fibre-reinforced thermosetting and thermoplastic composites incorporating unidirectional or non-unidirectional reinforcements such as mat, woven fabrics, woven rovings, chopped strands, combination and hybrid reinforcements, rovings and milled fibres and sheet made from pre-impregnated materials (prepregs);
- thermotropic liquid-crystal polymers.

The method is not normally suitable for use with rigid cellular materials and sandwich structures containing cellular material. Notched specimens are also not normally used for long-fibre-reinforced composites or thermotropic liquid-crystal polymers.

The method is suited to the use of specimens which can be either moulded to the chosen dimensions, machined from the central portion of a standard multipurpose test specimen (see ISO 20753) or machined from finished or semi-finished products such as mouldings, laminates and extruded or cast sheet.