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**Geometrical product specifications  
(GPS) — Surface texture: Areal —**

**Part 71:  
Software measurement standards**

*Spécification géométrique des produits (GPS) — État de surface:  
Surfacique —*

*Partie 71: Étalons logiciels*

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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.

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)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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

For an explanation on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 213, *Dimensional and geometrical product specifications and verification*.

This second edition cancels and replaces the first edition (ISO 25178-71:2012), which has been technically revised.

The main changes compared to the previous edition are as follows:

- the definition of [3.7](#) has been changed;
- [Table 1](#) has been changed.

A list of all parts in the ISO 25178 series can be found on the ISO website.

## Introduction

This document is a geometrical product specification (GPS) standard and is to be regarded as a general GPS standard (see ISO 14638). It influences the chain link G of the chains of standards on profile and areal surface texture.

The ISO/GPS Masterplan given in ISO 14638 gives an overview of the ISO/GPS system of which this document is a part. The fundamental rules of ISO/GPS given in ISO 8015 apply to this document and the default decision rules given in ISO 14253-1 apply to specifications made in accordance with this document, unless otherwise indicated.

For more detailed information of the relation of this document to the GPS matrix model, see [Annex B](#).

This document is concerned with software gauges (Type S1) and reference software (Type S2). It also defines the SDF file format for Type S1 software gauges.

The surface data file (SDF) format is already used by the industry, in particular, by instrument manufacturers and academia. The SDF file format as defined in this document is a standardized sub-set of the possibilities included in the SDF file format as initially defined in the European Surfstand project and EUR15178. It is envisaged that the SDF file format could evolve (as more experience in its usage and future requirements are identified) later in a version 2.0 with additional fields and possibilities.

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