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

Part 3:

Specification operators

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

Partie 3: Opérateurs de spécification



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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.

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 25178-3 was prepared by Technical Committee ISO/TC 213, *Dimensional and geometrical product specifications and verification*.

ISO 25178 consists of the following parts, under the general title *Geometrical product specifications (GPS) — Surface texture: Areal*:

- *Part 2: Terms, definitions and surface texture parameters*
- *Part 3: Specification operators*
- *Part 6: Classification of methods for measuring surface texture*
- *Part 70: Physical measurement standards*
- *Part 71: Software measurement standards*
- *Part 601: Nominal characteristics of contact (stylus) instruments*
- *Part 602: Nominal characteristics of non-contact (confocal chromatic probe) instruments*
- *Part 603: Nominal characteristics of non-contact (phase-shifting interferometric microscopy) instruments*
- *Part 604: Nominal characteristics of non-contact (coherence scanning interferometry) instruments*
- *Part 701: Calibration and measurement standards for contact (stylus) instruments*

The following parts are under preparation:

- *Part 1: Indication of surface texture*
- *Part 605: Nominal characteristics of non-contact (point autofocus probe) instruments*
- *Part 606: Nominal characteristics of non-contact (focus variation) instruments*

Introduction

This part of ISO 25178 is a geometrical product specification (GPS) standard and is to be regarded as a general GPS standard (see ISO/TR 14638). It influences the chain link 3 of the chains of standards on areal surface texture.

The ISO/GPS Masterplan given in ISO/TR 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 on the relation of this part of ISO 25178 to the GPS matrix model, see Annex E.

This part of ISO 25178 specifies the specification operators according to ISO 17450-2.

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

Part 3:

Specification operators

1 Scope

This part of ISO 25178 specifies the complete specification operator for surface texture (scale limited surfaces) by areal methods.

2 Normative references

The following referenced documents are indispensable for the application of this standard. For dated references, only the cited editions apply. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 14406:2010, *Geometrical Product Specifications (GPS) — Extraction*

ISO 14660-1:1999, *Geometrical Product Specifications (GPS) — Geometrical features — Part 1: General terms and definitions*

ISO/TS 16610-1:2006, *Geometrical Product Specifications (GPS) — Filtration — Part 1: Overview and basic concepts*

ISO 16610-21:2011, *Geometrical product specifications (GPS) — Filtration — Part 21: Linear profile filters: Gaussian filters*

ISO 17450-1:2011, *Geometrical Product Specifications (GPS) — General concepts — Part 1: Model for geometrical specification and verification*

ISO 17450-2:— ¹⁾, *Geometrical Product Specifications (GPS) — General concepts — Part 2: Basic tenets, specifications, operators, uncertainties and ambiguities*

ISO 25178-2:2012, *Geometrical Product Specifications (GPS) — Surface texture: Areal — Part 2: Terms, definitions and surface texture parameters*

3 Terms and definitions

For the purposes of this document, the terms and definitions given ISO 14660-1, ISO 16610-1, ISO/TS 14406, ISO 17450-1, ISO 17450-2 and ISO 25178-2 and the following apply.

3.1

lateral period limit

<optical> spatial period of a sinusoidal profile at which the optical response falls to 50 %

NOTE The lateral period limit depends on the heights of surface features and the optical method used to probe the surface.

1) To be published.