
**Paints, varnishes and printing inks —
Determination of fineness of grind**

*Peintures, vernis et encres d'imprimerie — Détermination de la
finesse de broyage*



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Foreword

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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 1524 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes*.

This fourth edition cancels and replaces the third edition (ISO 1524:2000), which has been technically revised. The main changes are as follows:

- a) products containing pigments in flake form (e.g. glass flakes, micaceous iron oxides, zinc flakes) have been excluded from the scope;
- b) [Figure 1](#) has been revised to show two examples of a typical gauge rather than one, and corrected to show the gauge scale in micrometres instead of millimetres;
- c) Figures 3 and 4 have been replaced by a new figure which indicates more clearly the reading on the gauge.

Paints, varnishes and printing inks — Determination of fineness of grind

1 Scope

This International Standard specifies a method for determining the fineness of grind of paints, inks and related products by use of a suitable gauge, graduated in micrometres.

It is applicable to all types of liquid paints and related products, except products containing pigments in flake form (e.g. glass flakes, micaceous iron oxides, zinc flakes).

Of the three gauges referred to in [4.1](#), the 100 μm gauge is suitable for general use, but the 50 μm and especially the 25 μm gauge will only provide reliable results in the hands of skilled laboratory personnel. Particular caution is necessary in interpreting readings of less than 10 μm .

2 Normative references

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

ISO 1513, *Paints and varnishes — Examination and preparation of test samples*

ISO 4618, *Paints and varnishes — Terms and definitions*

ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4618 and the following apply.

3.1

fineness of grind

reading obtained on a standard gauge under specified conditions of test, indicating the depth of the groove(s) of the gauge at which discrete solid particles in the product are readily discernible

4 Apparatus

4.1 Gauge, consisting of a block of a hardened steel e.g. 175 mm long, 65 mm wide and 13 mm thick.

At least for use with water-dilutable paints, a block of stainless steel should be used.

The top surface of the block shall be both plane and ground smooth and shall contain one or two grooves approximately 140 mm long and 12,5 mm wide parallel to the longer sides of the block. The depth of each groove shall be uniformly tapered along its length from a suitable depth (for example 25 μm , 50 μm or 100 μm) at one end to zero at the other end and shall be graduated as specified in [Table 1](#). A diagram showing two typical gauges is given in [Figure 1](#).