SVENSK STANDARD
SS-ISO 28279:2011

Fastställd/Approved: 2011-02-09
Publicerad/Published: 2011-02-23
Utgåva/Edition: 1
Språk/Language: engelska/English
ICS: 77.160

Sintrade metalliska material – Bestämning av nivån av renhet hos komponenter av sintermetall (ISO 28279:2010, IDT)

Sintered metal materials – Determination of the level of cleanliness of powder-metallurgy parts (ISO 28279:2010, IDT)

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Den internationella standarden ISO 28279:2010 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av ISO 28279:2010.

The International Standard ISO 28279:2010 has the status of a Swedish Standard. This document contains the official version of ISO 28279:2010.

Upplysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00. Standarder kan beställas hos SIS Förlag AB som även lämnar allmänna upplysningar om svensk och utländsk standard.

Information about the content of the standard is available from the Swedish Standards Institute (SIS), telephone +46 8 555 520 00. Standards may be ordered from SIS Förlag AB, who can also provide general information about Swedish and foreign standards.

Denna standard är framtagen av kommittén för Pulvermetallurgi, SIS/TK 133.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på www.sis.se - där hittar du mer information.

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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 28279 was prepared by Technical Committee ISO/TC 119, *Powder metallurgy*, Subcommittee SC 3, *Sampling and testing methods for sintered metal materials (excluding hardmetals)*.

Sintered metal materials — Determination of the level of cleanliness of powder-metallurgy parts

1 Scope

This International Standard specifies the determination of the amount and nature of the surface contamination of powder-metallurgy (PM) parts (i.e. the level of cleanliness of PM parts).

2 Symbols and units

For the purposes of this document, the following symbols and units apply.

Symbol	Explanation	Unit
C	Amount of contaminant.	mg/part
m_1	Mass of the as-received, dried 5 µm filter (4.4).	g
m_2	Mass of the dried 5 µm filter (4.4) plus the contaminants.	g
N	Number of parts taken for testing.	—

3 Principle

PM parts are pressure-rinsed with a filtered solvent that is subsequently re-filtered in order to capture surface contaminants. The filtered residue is weighed and the contaminant particles are examined with a magnifying glass or stereomicroscope in order to determine their nature.

4 Apparatus

4.1 Filter funnel.

4.2 Filtering flask, with a minimum volume of 2 L.

4.3 Vacuum pump.

4.4 Filter, 5 µm, made of polyester (preferred material) or polyamide of diameter 20 mm to 50 mm (type of filter depending on the solvent).

4.5 Filter, maximum 1 µm, made of polyester (preferred material), polyamide or cellulose (type of filter material depending on the solvent) of diameter 20 mm to 50 mm.

4.6 Analytical balance, of capacity at least 20 g and 0,000 1 g accuracy.

4.7 Petri-dish set, (only the bottom portion).

4.8 **Drying oven**, with a capability of at least 100 °C and 10 °C accuracy.

4.9 **Desiccator**.

4.10 **Pressure gun for liquids**.

4.11 **Solvent (white spirit)**.

4.12 **Stereomicroscope** (at least ×10 magnification) or **microscope**.

4.13 **Glass microscope slides**.

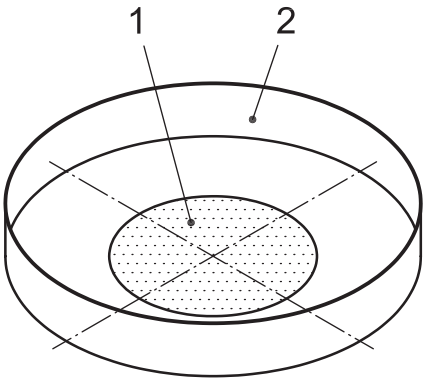
4.14 **Stainless-steel tongs**, with flat tips.

4.15 **Gloves**, made of latex or another type of plastic depending on the solvent used. The gloves should be used in order to prevent contamination during handling.

5 Procedure

5.1 Place the 5 µm filter (4.4) on the Petri dish (see Figure 1), and dry it in an oven (4.8) at 100 °C for at least 30 min.

The recommended filter mesh is 5 µm and other mesh should be agreed between the user and supplier.



Key

1 filter

2 Petri dish

Figure 1 — Filter ready to be dried

5.2 Transfer the Petri dish and filter to the desiccator (4.9), and cool it to room temperature.

5.3 Weigh the dried filter to the nearest 0,000 1 g with an analytical balance (4.6), and record the mass m_1.

5.4 Filter at least 2 L of white spirit solvent by using the filtering flask and the vacuum pump (see Figure 2), with the maximum 1 µm filter (4.5) (see Figure 2). Keep this filtered solvent in a clean glass bottle previously cleaned with pure solvent.

The recommended solvent is white spirit and any other solvent should be agreed between the user and supplier.