
**Metallic powders — Determination
of flowrate by means of a calibrated
funnel (Gustavsson flowmeter)**

*Poudres métalliques — Détermination du temps d'écoulement au
moyen d'un entonnoir calibré (cône d'écoulement de Gustavsson)*



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Foreword

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Metallic powders — Determination of flowrate by means of a calibrated funnel (Gustavsson flowmeter)

1 Scope

This International Standard specifies a method for determining the flow rate of metallic powders, including powders for hardmetals and mixes of metallic powders and organic additives such as lubricants, by means of a calibrated funnel (Gustavsson flowmeter).

The method is applicable only to powders which flow freely through the specified test orifice.

2 Principle

Measurement of the time required for 50 g of a metallic powder to flow through the orifice of a calibrated funnel of standardized dimensions.

3 Apparatus

3.1 Calibrated funnel, with the dimensions shown in [Figure 1](#) (see [Clause 4](#)). The dimensions shown for the flowmeter funnel, including the orifice, are not to be considered controlling factors. Calibration with emery, as specified in [Clause 4](#), determines the working flow rate of the funnel.

The funnel shall be made of a non-magnetic, corrosion-resistant metallic material with sufficient wall thickness and hardness to withstand distortion and excessive wear.¹⁾

3.2 Stand and horizontal vibration-free base, to support the funnel rigidly, e.g. as indicated in [Figure 2](#)¹⁾.

3.3 Balance, of sufficient capacity, capable of weighing the test portion to an accuracy of $\pm 0,05$ g.

3.4 Stopwatch, capable of measuring the elapsed time to an accuracy of $\pm 0,1$ s.

3.5 Chinese emery grit, a reference powder used for calibration of the funnel.¹⁾

1) Apparatus complying with 3.1 and 3.2, and standard Chinese emery grit can be purchased from ACuPowder International, LLC, 901 Lehigh Avenue, Union, NJ 07083, USA. This information is given for the convenience of users of this International Standard and does not constitute an endorsement by ISO of the company named above. Equivalent products may be used if they can be shown to lead to the same results.