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**Road vehicles — Test dust for filter  
evaluation —**

**Part 2:**  
**Aluminium oxide test dust**

*Véhicules routiers — Poussière pour l'essai des filtres —*

*Partie 2: Poussière d'essai d'oxyde d'aluminium*

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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.

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.

International Standard ISO 12103-2 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 7, *Injection equipment and filters for use on road vehicles*.

ISO 12103 consists of the following parts, under the general title *Road vehicles — Test dust for filter evaluation*:

- *Part 1: Arizona test dust*
- *Part 2: Aluminium oxide test dust*

Annexes A to C of this part of ISO 12103 are for information only.

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Printed in Switzerland

## Introduction

This part of ISO 12103 specifies a range of inorganic test dusts, manufactured from fused aluminium oxide, primarily used for evaluating the performance of both fuel and lubricating oil filters for internal combustion engines, generally by gravimetric methods.

This part of ISO 12103 is to be used in conjunction with a number of other International Standards which refer to the use of these test dusts in various filter performance test procedures.

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# Road vehicles — Test dust for filter evaluation —

## Part 2:

## Aluminium oxide test dust

### 1 Scope

This part of ISO 12103 specifies the particle size distribution of five inorganic test dusts used for the evaluation of filters.

These dust are used in conjunction with various test procedures designed to evaluate, in general, fuel and lubricating oil filters for internal combustion engines by gravimetric methods.

The dusts may also be used for a number of other applications, such as for abrasion tests, where distinct, known particle size distributions of hard, abrasive material are required.

### 2 Test dust designation

#### 2.1 Designation

These “M” series test dusts are available in five standard grades<sup>1)</sup>, which are designated as follows:

- ISO 12103-M1 for nominal particle size: 5 µm
- ISO 12103-M2 for nominal particle size: 7 µm
- ISO 12103-M3 for nominal particle size: 14 µm
- ISO 12103-M4 for nominal particle size: 30 µm
- ISO 12103-M5 for nominal particle size: 55 µm

#### 2.2 General description

All five grades of dust are made from fused aluminium oxide ( $\text{Al}_2\text{O}_3$ ) having a density of 3 960 kg/m<sup>3</sup>. The bulk density of the material, which varies with grade, is in the range 500 kg/m<sup>3</sup> to 2 300 kg/m<sup>3</sup>. The colour of the material also varies, from off-white to brown, depending on the particle size range and grade.

1) Suitable products are available commercially. Details can be obtained from the Secretariat to Technical Committee ISO/TC 22 or from the ISO Central Secretariat.