



BSI Standards Publication

Road vehicles — Test contaminants for filter evaluation

Part 3: Soot contaminant

National foreword

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Foreword

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This document was prepared by Technical Committee ISO/TC 22, *Road Vehicles*, Subcommittee SC 34, *Propulsion, powertrain and powertrain fluids*.

A list of all parts in the ISO 12103 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document specifies a grade of test aerosol, which is composed of soot from a combustion source similar to soot occurring in the environment that motor vehicles are commonly subjected to. This test contaminant is developed for air filter media and element testing.

Ambient aerosols include at least two distinct modes of aerosol: a sub-micron mode and a super-micron mode. Generally the sub-micron mode comes from combustion sources or condensation of gases. The super-micron mode comes from physical abrasion processes and wind-blown dust. The test dusts described in [ISO 12103-1](#) can be used to simulate the super-micron mode of ambient aerosol for testing air filters. The soot aerosol described in this document is intended to simulate the sub-micron mode of ambient aerosol.

There are several possible methods of generating soot aerosol, to simulate the sub-micron mode for air filter testing purposes such as dispersing soot from a powder or using generated soot from a combustion process.

Particle size of soot dispersed from bulk powder exceeds the environmental soot considerably.

For generated soot from a combustion process, a new procedure is described in this document. Using aliphatic hydrocarbons, the soot consists of a combination of carbon, organic hydrocarbons and other substances.

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