

English Version

Materials produced from end of life tyres - Specification of categories based on their dimension(s) and impurities and methods for determining their dimension(s) and impurities

Matériaux produits à partir de pneumatiques en fin de vie -
Spécification de catégories basées sur leur(s) dimension(s)
et impuretés et méthodes pour déterminer leur(s)
dimension(s) et impuretés

Materialen aus Altreifen - Festlegung von Klassen anhand
ihrer Abmessung(en) und Verunreinigungen und Verfahren
zur Bestimmung ihrer Abmessung(en) und
Verunreinigungen

This Technical Specification (CEN/TS) was approved by CEN on 4 January 2010 for provisional application.

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Foreword

This document (CEN/TS 14243:2010) has been prepared by Technical Committee CEN/TC 366 "Project Committee - Tyre recycling", the secretariat of which is held by UNI.

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Introduction

This Technical Specification is the first in a foreseen series of Technical Specifications. Such series would cover the testing programmes needed to characterise each product category as shown on the figure below.

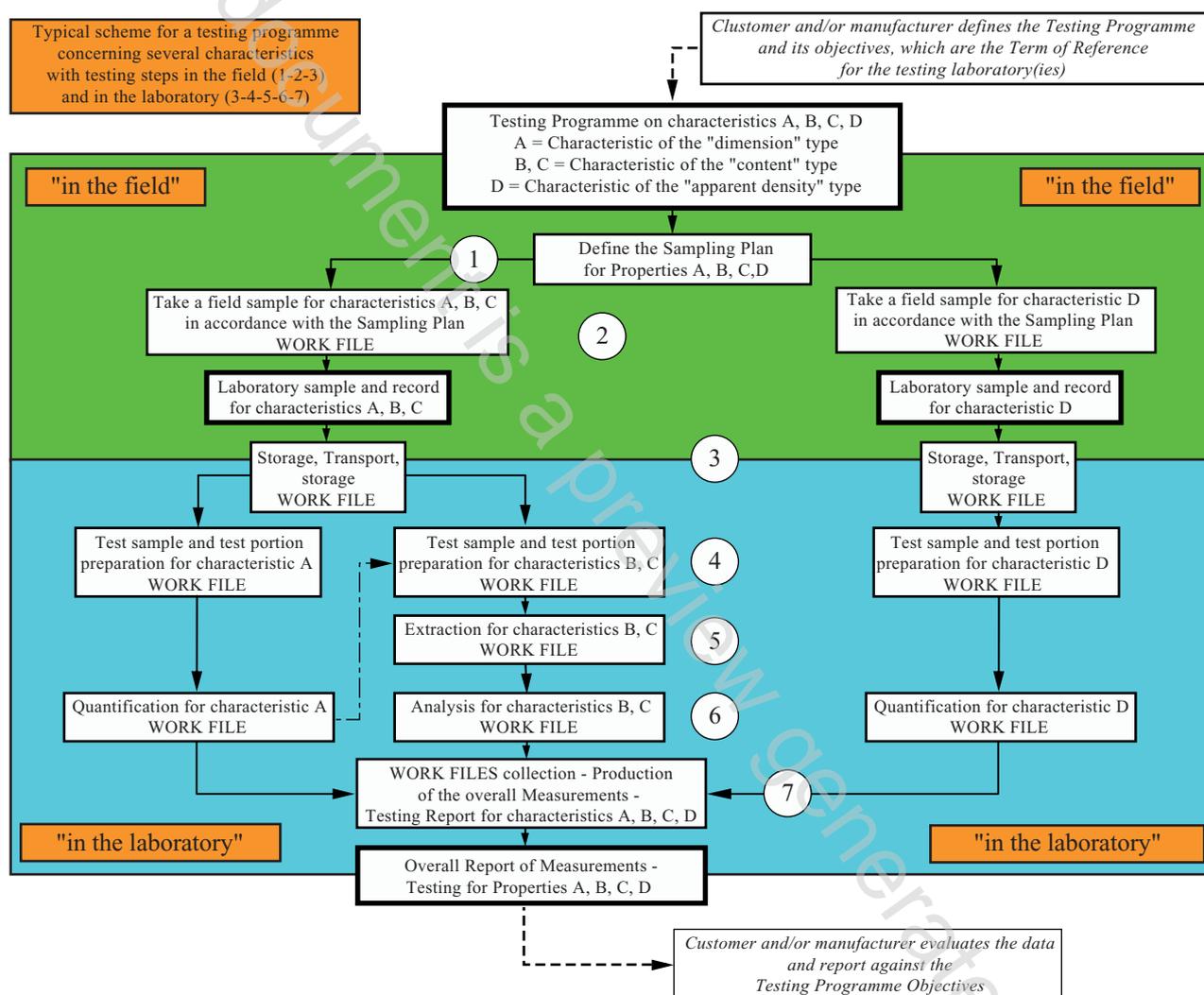


Figure 1 — Typical scheme for a testing programme concerning several characteristics with testing steps in the field and in the laboratory

End-of-life tyres consist mainly of passenger and commercial vehicle tyres, and truck tyres manufactured for distribution in the European market. Products from end-of-life tyres are used as a secondary raw material finding a wide range of applications. The principal categories of materials from end-of-life tyres are defined on the basis of their dimension(s) according to this Technical Specification. Determination of additional dimensions/impurities according to the test methods specified in normative Annexes A, B, C and D may be performed if required by agreement between the producer and the customer or at the producer's own will.

European Standards are needed for the production, trade and use of the materials from end-of-life tyres. They are also useful for buyers of materials, regulators, controllers and laboratories.

The materials produced at different stages of the treatment processes, primarily by size reduction, of end-of-life tyres are as follows:

- cuts: typically 300 mm and above;
- shreds: typically 20 mm – 400 mm;
- chips: typically 10 mm – 50 mm;
- granulates: typically 0,8 mm – 20 mm;
- powders: typically under 0,8 mm;
- steel;
- textiles.

They may be distinguished mainly according to their dimension(s).

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1 Scope

This Technical Specification provides definitions for the categories of materials produced from end-of-life tyres based on their dimension(s) or impurities. It also provides test methods for the determination of the dimension(s) of the materials produced from all categories of end-of-life tyres at all steps of the treatment process as well as for the determination of impurities.

The test methods described in this Technical Specification include sample collection and the preparation of a representative sample based on a sampling plan for the purpose of determining dimensions and impurities.

This Technical Specification does not cover the operational performance or fitness for use of the materials which are deemed to be a function of agreement between the producer and the customer.

NOTE This Technical Specification does not cover downstream products prepared from the materials, including reclaimed or devulcanized rubber, surface-modified powders and pyrolytic output.

This Technical Specification does not purport to address safety concerns associated with its use. It is the responsibility of the user of this Technical Specification to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

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.

EN 933-1, *Tests for geometrical properties of aggregates — Part 1: Determination of particle size distribution — Sieving method*

EN 933-2, *Tests for geometrical properties of aggregates — Part 2: Determination of particle size distribution — Test sieves, nominal size of apertures*

ISO 565, *Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings*

ISO 3310-1:2000, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth*

ISO 3310-2:1999, *Test sieves — Technical requirements and testing — Part 2: Test sieves of perforated metal plate*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

sample

amount of material taken from a population and intended to provide information on the population

3.2

sub-sample

portion of a sample

3.3

increment

portion of material extracted in a single operation of the sampling device