NSAI Standards

Standard Recommendation
S.R. CEN/TR 16220:2011

Construction products - Assessment of release of dangerous substances - Complement to sampling

S.R. CEN/TR 16220:2011

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TECHNICAL REPORT

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Construction products - Assessment of release of dangerous substances - Complement to sampling

Produits de construction - Evaluation de l'émission de substances dangereuses - Complément relatif à l'échantillonnage

Bauprodukte - Bewertung der Freisetzung von gefährlichen Substanzen - Ergänzung zur Probenahme

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Foreword

This document (CEN/TR 16220:2011) has been prepared by Technical Committee CEN/TC 351 “Construction products: Assessment of release of dangerous substances”, the secretariat of which is held by NEN.

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0 Introduction

0.1 Objective

This CEN/TR provides a complement to the sampling of construction products. Sampling of construction products for other characteristics than the release or emission of regulated dangerous substances is described in product standards and ETAs[1)]. This CEN/TR is based on mandate M366 of the European Commission[2)]. It provides requirements which are specific for the sampling of construction products for the determination of the release or emission of regulated dangerous substances. The mandate implies that existing sampling standards from product TCs, or sampling instruction in product standards from product TCs, are to be used as much as possible. Consequently this CEN/TR and the sampling parts of the standards prepared by WG 1 and WG 2 of CEN/TC 351 (see below 0.3) should be used as a *complement* to the sampling of construction products as described in existing standards and ETAs. It does not provide full guidance to sampling of construction products.

NOTE 1 As a consequence of the fact that this CEN/TR is a *complement* to existing standards of product TCs, some instructions that would be an integral part of a full sampling standard, are missing in this CEN/TR. An obvious example thereof is the fact that this CEN/TR contains no instructions for actually taking a sample.

Existing sampling standards and instructions[3)] for the sampling of construction products are to be compared with this CEN/TR, in order to determine if the requirements recommendations for sampling as described in this CEN/TR can be met with the existing sampling standards and instructions. If not, product TCs may have to adapt their sampling standards and instructions following appropriate provisions included in the standards to be produced by WG 1 and WG 2. For this purpose this CEN/TR contains a checklist in Annex G.

NOTE 2 Product TCs should be aware of the fact that sampling for the determination of the emission and/or release of dangerous substances, might differ from their current sampling procedures which are used to determine product characteristics.

0.2 Terminology

It is essential that a number of key terms, as mentioned in Clause 2, are well understood when working with this CEN/TR. These key terms are defined in Annex A, which annex also contains Figure A.1 that depicts the relation between these key terms.

0.3 Relation with the deliverables of CEN/TC 351/WG 1 and WG 2

At the time that this CEN/TR is developed, CEN/TC 351 comprises two Working Groups (WGs): CEN/TC 351/WG 1: Release from construction products into soil, ground water and surface water and CEN/TC 351/WG 2: Emissions from construction products into indoor air. Both WGs have to, within their scope, deliver a complete test procedure of which sampling is just a part. The interface between these sampling parts, product standards and this TR have been defined in TC 351 resolution 81[4)]. The test results are to be used for CE-marking (and corresponding AoC) and are produced according to WG 1 and WG 2

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1) ETA: European Technical Approval issued by the European Organisation for Technical Approvals (EOTA).

2) Mandate M366 "Development of horizontal standardised assessment methods for harmonized approaches relating to dangerous substances under the Construction Products Directive"; European Commission, DG Enterprise, Brussels 16 March 2005.

3) This document refers both to sampling standards as published by product TCs as well as to product standards that contain sampling instructions as part of an overall test procedure.

4) Resolution 81 taken by CEN/TC 351 on 23-24 April 2008 reads: CEN/TC 351 confirms the recommendation 1 of TG 4 taken at its March 2008 meeting as given in document N 149, which is "It is the responsibility of product TCs to specify the detailed procedure for sampling. However, they have to follow the general requirements provided by WG 1 and WG 2 that are to be based on the technical report prepared by TG 4." The decision was taken by unanimity.

1 Scope

This Technical Report covers the specific requirements for sampling construction products to determine the release or emission of dangerous substances in their intended use. It is complementary to existing sampling standards and sampling instruction in product standards or test methods for construction products of CEN product TCs and EOTA committees which fall under the CPD.

The scope of this Technical Report covers all activities related to product sampling, starting with the initial planning of sampling until the delivery and formal transfer of the laboratory sample at the laboratory.

This Technical Report:

— does not deal with sub-sampling in the laboratory as a step towards the preparation of the test portion / test specimen[5)];

— does not deal with the second sampling domain in which a sample is to be taken from the air (emission) or water (release) with which the test portion / test specimen has been in contact;

— does not deal with the statistical testing of a construction product against (legislative) limit values, nor does it deal with the definition of repetitive sampling, suitable for fulfilling requirements with respect to a minimum level of uncertainty in a series of test results.

This Technical Report focuses on obtaining a single sample. Repetitive sampling is outside the scope as the boundary conditions for routine testing against a limit are not yet defined (e.g. the necessary reliability). Despite the fact that repetitive sampling is not covered, the conditions provided in this Technical Report apply for an individual sample, as well as for a sample that is part of a series.

2 Key concepts

2.1 Introduction

2.1.1 Key terms

A number of key terms for product sampling are introduced in this clause, including: population, sub-population, scale, increment, composite sample, sample, laboratory sample and test portion / test specimen. The definition of these key terms is independent whether the release or emission of dangerous substances is to be assessed.

NOTE 2.1 gives a general description of some of the key terms and Annex A gives a formal definition together with a figure showing the relationship between some of these terms.

2.1.2 Representativeness

The ultimate goal of product sampling is obtaining a representative portion of the sampled construction product; maintaining the representativeness is essential in all steps where a (partial) sample of the product is involved. Whenever there is variability in the product, measures are to be taken in order to ensure the representativeness of the sample.

NOTE 1 When it comes to maintaining the representativeness of the sampled product, the full test procedure needs to be taken into account.

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5) This document regularly refers both to the term 'test portion' and the term 'test specimen' which are equivalent terms. However, as the term 'test portion' is used in the field of release to soil and water, and the term 'test specimen' is used in the field of emissions to indoor air, both are referred to.