



CEN/BT WG 176

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Work Programme in response to mandate M/366

**Drafted by
CEN/BT WG 176 “Construction Products: Assessment of
Release of Dangerous Substances”**

INTRODUCTION

The second generation of harmonised product standards under the Construction Products Directive (CPD) requires harmonised test methods for release or emission of dangerous substances to satisfy the requirements of Essential Requirement 3 (ER 3) of the CPD. The European Commission has issued Mandate M/366 to CEN. CEN/BT resolution C025/2005 regarding the acceptance of the Mandate and the Form A issued by NEN for new work has been approved by the National Standards Bodies in May 2005. The first task of CEN/BT WG 176 "Construction Products: Assessment of Release of Dangerous Substances" is to provide a Work Programme for the new CEN/TC on the subject.

Mandate M/366 required a multistage approach to deliver the standards. The first stage is the delivery of the Technical Reports in Work Items 1 to 4. During this stage the European Commission may finalize the list of the priority dangerous substances to be addressed. This is then followed by the elaboration of draft standards or use of existing standards, validation in terms of robustness and variability-uncertainty, and delivery of the test method standards, Work Items 5 to 12. The third phase of the work is amendment of the harmonized product standards.

This Work Programme

This Work Programme proposes an initial programme of 12 Work Items, and will be followed later (12-18 months) by a more detailed programme of test procedures requiring validation work, and subsequently, at a time still to be decided, by the programme for amendment of the harmonized product standards. As a result the funding required at this stage is for Work Items 1-12 and will be followed by subsequent requests for funding for the subsequent phases.

The Work Programme was agreed by CEN/BT WG 176 at its meeting on 22-24 June 2005 in Gouda, The Netherlands. This document contains the Work Programme, and is added to the Response to the Mandate by CEN to the Commission. The acceptance of the Work Programme by the Commission is a requirement for allocating funds from the Commission to execute the work. It is therefore necessary that the Work Programme is accepted by the Commission as soon as possible in order to be able to start the work.

Points of attention

The CPD is designed to remove barriers to trade. ER3 deal with the barriers to trade caused by hygiene, health and environment. Therefore, only if regulations regarding health, safety and environment result in barriers to trade, assessment methods for construction products are required.

Since so many parties are involved, communication is even more important than in usual CEN standardisation activities. Particular attention will be given to the bi-directional communication with the product TCs. Other organisations such as EOTA will be contacted as well. In fact, everywhere where 'product standards' are mentioned in this document, the equivalent EOTA deliverables should be considered as well.

Definitions of terms are important in order to avoid miscommunications. For example the terms 'release' and 'emission' both refer to the transport of substances from construction products to the environment. In this document

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release is considered the more general term and emission is used for the specific situation in indoor air. The TC will pay particular attention to definitions, based on the terminology of the CPD.

At the moment no final list of substances is available. This list should be derived from the European Commission's database on notified national regulations. The European Commission Expert Group on Dangerous Substances in Construction Products will eventually propose this list to the Commission. For the time being, the Work Programme refers to the list of substances in Annex 2, to which the European Commission can make additions or amendments. The Work Programme is budgeted based on the list in Annex 2.

It is expected that horizontal test methods, applicable to all or most product groups that release substances under a specific scenario, can be found and adapted for use. Only when a justified claim for amendment or even a vertical standard is accepted, such assessment methods will be developed. The justification will typically follow after the validation of the horizontal method. Construction products should be tested for specified intended conditions of use. The producer cannot be held responsible in case the product is used wrongly when the conditions of use were clearly declared by the producer. It is clear that the focus of the CPD is on the release of substances, not on the content; when a substance is bound to the matrix of the material it cannot cause a risk during its use in the works.

The test method standards will be published initially as Technical Specifications. Such CEN/TS will be the basic document available to start the validation work. It is clear to all participants in CEN/BT WG 176 that only after validation a European Standard can be published, since the validation (in terms of robustness and variability-uncertainty) provides the information on the quality and usefulness of the assessment method. The current requirement to publish a standard within three years after the start of the work does not apply if the standard needs to be validated. The validation cycle typically adds two years to the development of a standard.

It is also clear that for other purposes, assessment methods are needed or already in place. For consistency these methods will be reviewed in order to see whether they could be applicable for ER3, since this would result in lowering costs.

The work programme focuses on horizontal harmonised methods for assessment of construction products regarding ER3 of the CPD. The identification of the necessary instruments follows a conceptual framework, addressing the procedural conventions needed to come from ER 3 via selected release scenarios and corresponding performance criteria to the practical assessment procedures (see figure 1).

Harmonisation of assessment methods implies that as far as possible only one method is chosen for a particular parameter. Thus, the costs for assessing construction products are limited and the producer has to have his products tested only once for CE-marking, after which the product can be placed on the market in all Member States.

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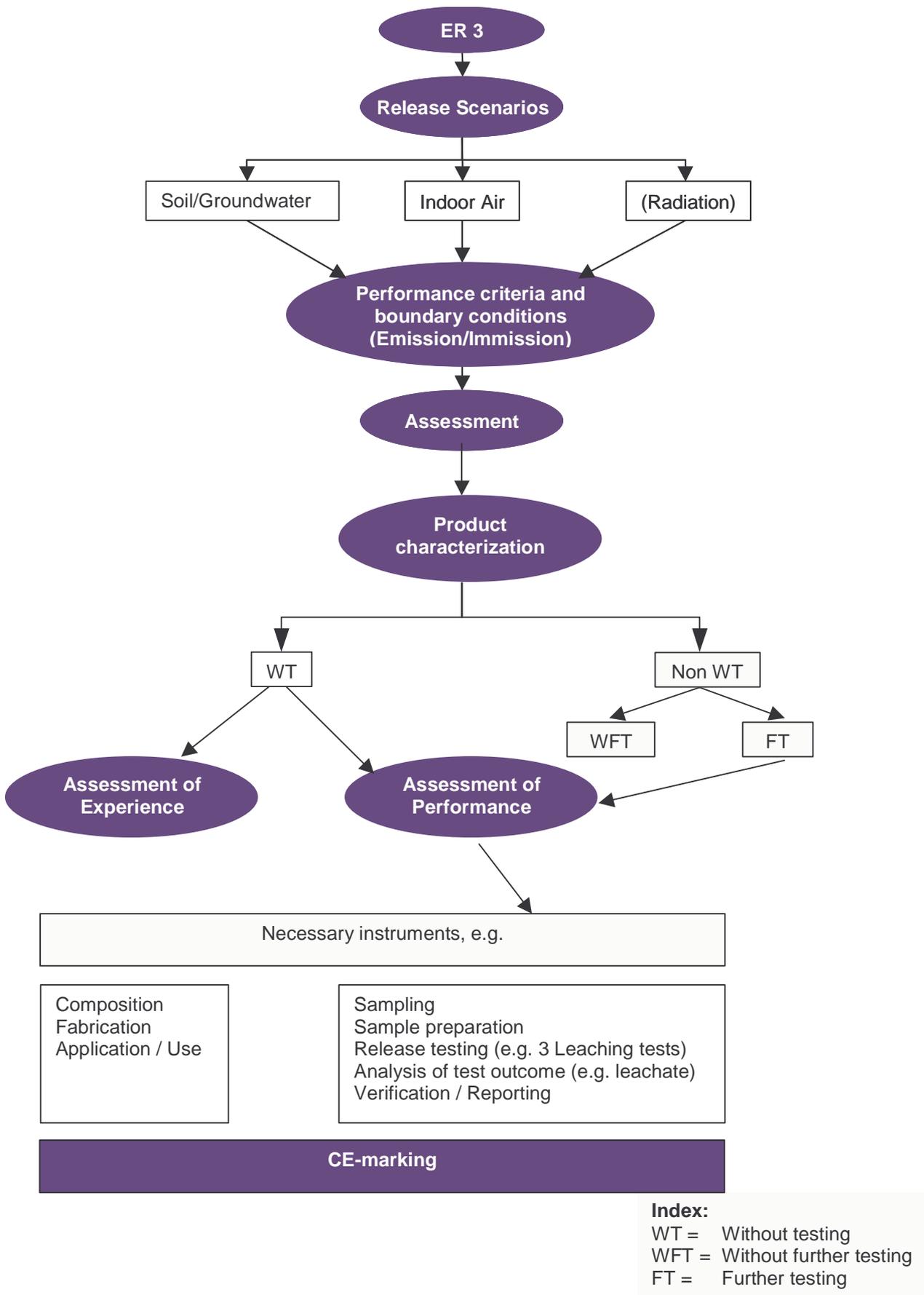


Figure 1 – Conceptual Framework for assessing construction products regarding ER3

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Before the harmonised product standards can be amended for the purpose of ER3, the TRs need to be developed to a 'mature' state, since choices of methods and substances may depend on their outcome. In particular priority will be given to TRs 1-3. TR 4 can only be finalised when a first set of standards is available to show how these could be incorporated in the harmonized product standards. Preliminary work on this subject could start from the beginning.

DEVELOPMENT OF THE DELIVERABLES REQUIRED BY MANDATE M/366

The BT/WG 176 intends to have the deliverables required by the Mandate M/366 elaborated by a new CEN/TC with the following:

Title of the TC

Construction Products: Assessment of Release of Dangerous Substances

Scope of the TC

Development of horizontal standardised assessment methods for harmonised approaches relating to the release (and/or the content when this is practicable or legally required) of regulated dangerous substances under the Construction Products Directive (CPD) taking into account the intended conditions of use of the product. It addresses emission to indoor air, and release to soil, surface water and ground water.

Time-schedule

It is expected to have the new CEN/TC established in October 2005 to allow its first meeting of be held on 2006-01-25/26.

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ANNEX 1 – TABLE OF WORK ITEMS AND TARGET DATES

Under the assumption that the Commission accepts the Work Programme and the funding for the work is made available as of January 1st, 2006, the following target dates are identified in the table. The mandate considers a time frame until 2010.

<i>ID</i>	<i>Title</i>	<i>Scope</i>	<i>Status</i>	<i>Target dates</i>
WI 1	Construction Products – Assessment of release of dangerous substances – Barriers to trade	This Technical Report (TR) indicates the barriers to trade as identified by the product Technical Committees and other available sources in relation to release of regulated dangerous substances into indoor air, surface water, groundwater or soil. This TR describes if and how these barriers to trade can be resolved or prevented by the standards included in the work programme for the CEN Technical Committee ‘Construction Products: Assessment of Release of Dangerous Substances’.	TR	Final Draft: 2006-12-31 Publication: 2007-06-30

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ID	Title	Scope	Status	Target dates
WI 2	Construction Products – Assessment of release of dangerous substances – The concept of horizontal testing procedures	<p>This Technical Report (TR), taking into account the state of the art in the Member States, identifies the role of testing in the assessment of construction products in view of possible emissions and makes recommendations on the testing procedures. The TR reviews in accordance with the experience already gained, the basis for deciding whether or not the use of horizontal test method standards for construction products is practicable and/or necessary in the sense of article 7.2 of the Construction Products Directive, and the Guidance Papers¹, in particular Guidance Papers H and M.</p> <p>The Technical Report also recommends how harmonized technical specifications (e.g. harmonized product standards) should address the subject of regulated dangerous substances. The TR also recommends how the expertise of product Technical Committees can be used when drafting the horizontal test method standards. The TR provides recommendations for complete testing procedures in the overall framework according to the methods for the Attestation of Conformity².</p>	TR	Final Draft: 2007-03-31 Publication: 2007-09-30
WI 3	Construction Products – Assessment of release of dangerous substances – Methodologies for “Without Testing (WT)” and “Without Further Testing (WFT)”	<p>This Technical Report (TR) develops a methodology for identifying products as Without Testing (WT) and Without Further Testing (WFT).</p>	TR	Final Draft: 2007-03-31 Publication: 2007-09-30

¹ The Guidance Papers of the European Commission can be found at http://europa.eu.int/comm/enterprise/construction/internal/guidpap/guidpap_en.htm. Guidance Paper H is called "A Harmonised Approach relating to dangerous substances under the Construction Products Directive". Guidance Paper M is called "Conformity Assessment under the CPD: Initial type-testing and Factory production control".

² See Annex III of the Construction Products Directive (CPD).

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ID	Title	Scope	Status	Target dates
WI 6	<p>Construction Products – Assessment of release of dangerous substances – Content of regulated dangerous substances in construction products</p>	<p>This horizontal standard⁴ describes the methods for the determination of the content of regulated dangerous substances in construction products. This standard is applicable to all substances relevant in accordance with the provisions of the main body of Mandate M/366, i.e. those included in the work programme for the emission into indoor air, and release to surface water, ground water and soil.</p> <p>Note 1: The selection of appropriate test method standards from those already available will be based on a TR, which will be prepared prior to the drafting of the standard.</p> <p>Note 2: Analysis of content may include non-destructive and destructive methods. Analysis of extracts resulting from destructive methods are analysed according to the standards coming from WI 8.</p> <p>Note 3: The procedures described in WI 6 and WI 8 will cover all the steps from the reception of the laboratory sample to the final result (storage, preparation of the test portion, pre-treatment, extraction, analysis and reporting).</p>	EN	<p>Start date: 2007-01-01 Publication (TS): 2008-06-30 Start of validation: 2008-06-30 Validation/reporting: 2010-06-30 TC enquiry: 2010-06-30 Formal Vote: 2010-12-31</p> <p>Note: the end of the validation includes a draft for the EN</p> <p>First Draft: 2006-12-31 Final Draft: 2007-06-30 Publication: 2007-12-30</p>

⁴ For simplicity it has been adopted to use singular for the term 'standard' throughout this Annex, but plural will be possible or likely.

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ID	Title	Scope	Sta-tus	Target dates
WI 7	Construction Products – Assessment of release of dangerous substances – Leaching methods.	<p>This horizontal standard⁵ describes the leaching methods producing eluates for subsequent analysis of regulated dangerous substances and parameters from construction products.</p> <p>Note: The procedures described in WI 7 and WI 8 will cover all the steps from the reception of the laboratory sample to the final result (storage, preparation of the test portion, pre-treatment, leaching, analysis and reporting).</p>	EN	<p>Start date: 2007-01-01 Draft approved by TC: 2007-12-31 Start of validation: 2008-01-01 Validation/reporting: 2009-12-31 TC enquiry: 2009-12-31 Formal Vote: 2010-09-30</p> <p>Note: the end of the validation includes a draft for the EN</p>
WI 8	Construction Products – Assessment of release of dangerous substances – Eluate and extract analysis	<p>This horizontal standard⁵ describes the measurement of regulated dangerous substances and parameters in the eluates obtained from leaching tests and in extracts from sample digestion of construction products under specified conditions.</p> <p>Note: The procedures described in WI 6, WI 7 and WI 8 will cover all the steps from the reception of the laboratory sample to the final result (storage, preparation of the test portion, pre-treatment, analysis and reporting).</p>	EN	<p>Start date: 2007-01-01 Draft approved by TC: 2007-12-31 Start of validation: 2008-01-01 Validation/reporting: 2009-12-31 TC enquiry: 2009-12-31 Formal Vote: 2010-09-30</p> <p>Note: the end of the validation includes a draft for the EN</p>

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ID	Title	Scope	Status	Target dates
WI 9	<p>Construction Products – Assessment of release of dangerous substances – Methods for generation of emission into indoor air</p>	<p>This horizontal standard⁶ describes the methods for generation of emission of dangerous substances from construction products into indoor air in standardised testing facilities.</p> <p>Note: The procedures described in WI 9 and WI 10 will cover all the steps from the reception of the laboratory sample to the final result (storage, preparation of the test portion, analysis and reporting).</p>	EN	<p>Start date: 2007-01-01 Draft approved by TC: 2007-06-30 Start of validation: 2007-06-30 Validation/reporting: 2009-06-30 TC enquiry: 2009-06-30 Formal Vote: 2010-03-30</p> <p>Note: the end of the validation includes a draft for the EN</p>
WI 10	<p>Construction Products – Assessment of release of dangerous substances – Analysis of emissions into indoor air</p>	<p>This horizontal standard⁶ describes the measurement of regulated dangerous substances in indoor air samples as generated from construction products in standardised testing facilities.</p> <p>Note: The procedures described in WI 9 and WI 10 will cover all the steps from the reception of the laboratory sample to the final result (storage, preparation of the test portion, analysis and reporting).</p>	EN	<p>Start date: 2007-01-01 Draft approved by TC: 2007-06-30 Start of validation: 2007-06-30 Validation/reporting: 2009-06-30 TC enquiry: 2009-06-30 Formal Vote: 2010-03-30</p> <p>Note: the end of the validation includes a draft for the EN</p>

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WI 11	<p>Construction Products – Assessment of release of dangerous substances – Measurement of radiation</p>	<p>This horizontal standard⁷ describes the measurement of radiation and radioactive emissions from construction products.</p> <p>Note: Prior to the development of the standard, a state-of-the-art document will be developed depending on the outcome for WI 1. The document will be used to decide on further steps.</p>	EN	<p>Start date: 2008-01-01 Publication (TS): 2009-06-30 Start of validation: 2009-06-30 Validation/reporting: 2011-06-30 TC enquiry: 2011-06-30 Formal Vote: 2011-12-31</p> <p>Note: the end of the validation includes a draft for the EN</p>
WI 12	<p>Construction Products – Assessment of release of dangerous substances – Assessment for potential growth of relevant micro-organisms</p>	<p>This horizontal standard⁷ describes the assessment for potential growth of relevant micro-organisms on construction products in the indoor environment.</p> <p>Note: Prior to the development of the standard, a state-of-the-art document has to be developed depending on the outcome for WI 1. The document will be used to decide on further steps.</p>	EN	<p>Start date: 2008-01-01 Publication (TS): 2009-06-30 Start of validation: 2009-06-30 Validation/reporting: 2011-06-30 TC enquiry: 2011-06-30 Formal Vote: 2011-12-31</p> <p>Note: the end of the validation includes a draft for the EN</p>

⁷ For simplicity it has been adopted to use singular for the term 'standard' throughout this Annex, but plural will be possible or likely.

ANNEX 2 – PRELIMINARY LIST OF SUBSTANCES TO BE CONSIDERED

When drafting this Work Programme and proposing target dates in June 2005, CEN/BT WG 176 had in mind the following substances to be considered:

Substances considered for emission into indoor air

- VOC
- Formaldehyde

Substances considered for the release to soil, groundwater and surface water

- Heavy metals/trace elements – arsenic, cadmium, lead, mercury, nickel, chromium, copper, zinc, cobalt, thallium, vanadium
- Sum parameters for organic carbon – TOC, DOC.
- Organic substances or groups of substances – benzene, phenols, PAH, PCT, PCB, polychlorinated dibenzodioxin, polychlorinated dibenzofuran, creosote, hydrocarbons, pentachlorophenol.
- Inorganic substances – chloride, sulphate, fluoride, cyanide
- Asbestos.

Disclaimer

The starting point for the work is the list of parameters given in mandate M/366.

This list of parameters by no means implies that these parameters will be selected for inclusion in the CPD as regulated substances, or that the ultimate list of regulated substances will be limited to this list.

The aim is to adopt/develop the methods to quantify emission into air and release to soil and groundwater covering a range of substance behaviours, such that most of the final selection by the Commission and MS will be covered by the horizontal methods to be standardised.

For several of the parameters methods are adequately developed to assess release. Where the current state of the art is not sufficiently progressed to ensure evaluation by release, determination of content of dangerous substances is a practicable alternative way.