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INTRODUCTION

The second or subsequent generation of harmonised technical specifications 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 "Development of horizontal standardized assessment methods for harmonized approaches relating to dangerous substances" was to provide a Work Programme for the new CEN/TC on the subject.

Mandate M/366 requires 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 technical specifications.

This Business Plan
This Business Plan proposes an initial work programme of 12 Work Items. This Work Programme 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. The Work Programme was added to the Response to the Mandate by CEN to the Commission. The draft Business Plan for the new CEN/TC has been considered by CEN/BT and this resulted in the establishment of CEN/TC 351 (CEN/BT Resolution C049/2005). 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 Technical Committee of CEN dealing with the mandate issued by DG Enterprise has to comply with needs, prioritisation and planning of the mandate. The mandate is clear on these subjects and even on the way they need to be complied with.

The CPD is designed to remove barriers to trade. ER3 deals with the barriers to trade caused by health, safety, and environmental regulation. Therefore, only if regulations regarding hygiene, health 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 standardization 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 release is considered the more general term and emission is used for the specific situation in indoor air. The CEN/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 3, to which the European Commission can make additions or amendments.
Experts are invited to suggest amendments in the relevant WG of the horizontal CEN/TC, while awaiting the definitive instruction by the Commission. The list in Annex 3 only serves the purpose of budgeting the work.

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.
If there are legal requirements on European or national level (e.g. for CMR-substances) the content of the dangerous substance has to be evaluated independent if the substance is bound to the matrix of the material or not (see also the scopes of the work items).

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/TC 351 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.

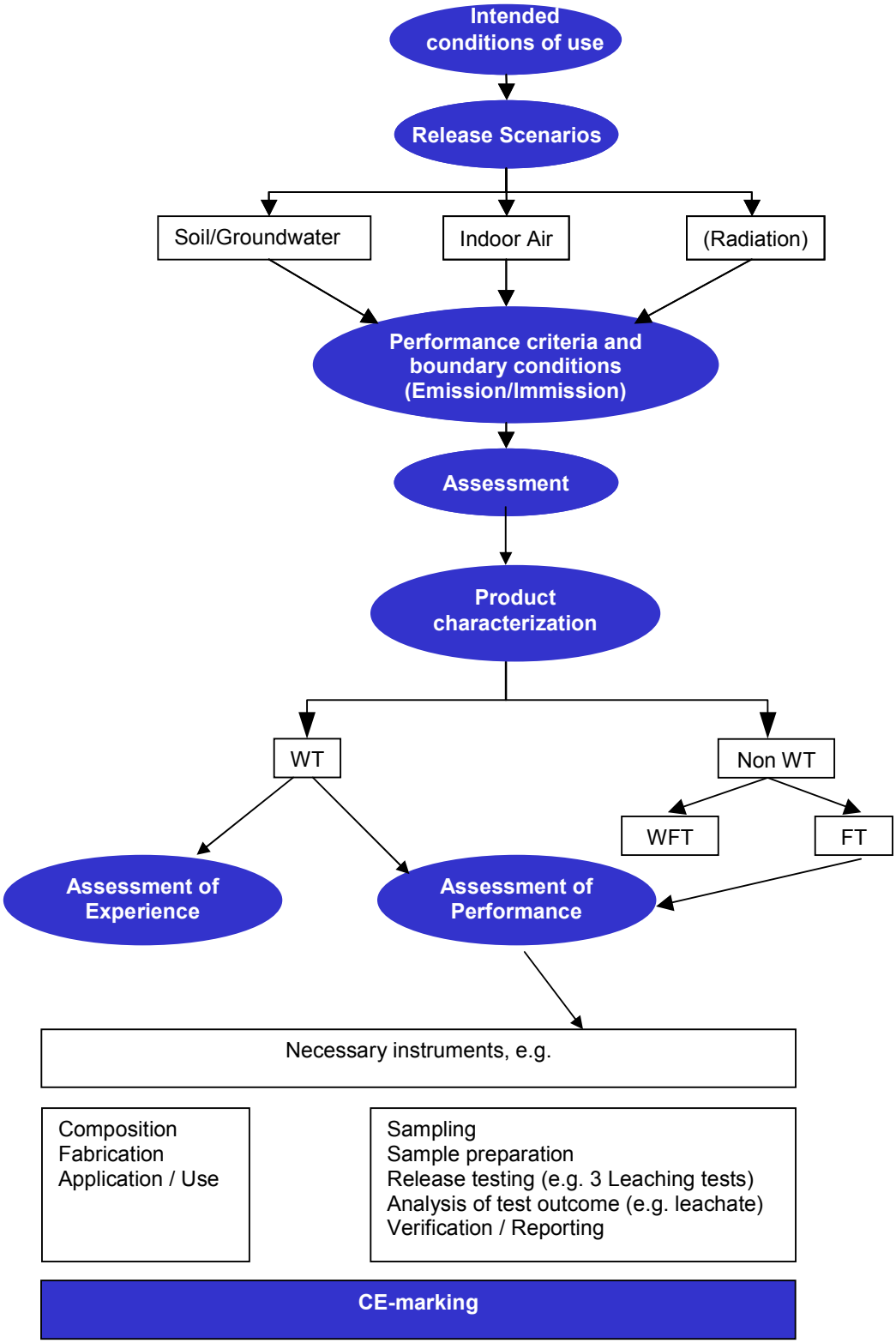
It is also clear that for other purposes, assessment methods are needed or already in place. For consistency these methods will be reviewed in order to see whether they could be applicable for ER3, since this would result in lowering costs.

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 internal European market.

Before the harmonised product standards can be amended for the purpose of ER3, the Technical Reports (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 the TRs on Barriers to Trade, on Horizontal Testing Procedures and on Methodologies for WT[1] and WFT[1] (Work Items 1 to 3). The TR on the Use of Horizontal methods (WI 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.

1 WT: Without Testing; WFT: Without Further Testing. These concepts refer to the principle whereby products are deemed to satisfy requirements as they do not contain or cannot release dangerous substances or cause adverse impacts on human health and the environment during their intended use.



Index:
WT = Without testing
WFT = Without further testing
FT = Further testing

Figure 1 – Conceptual Framework for assessing construction products regarding ER3; a final scheme will be part of TR 3.

FOREWORD

The mandate M/366 concerning the "Development of horizontal standardized assessment methods for harmonised approaches relating to dangerous substances under the Construction Products Directive (CPD) – Emission to indoor air, soil, surface water and groundwater" has been prepared by the expert group of Directorate General Enterprise of the European Commission and has been issued by the Construction Unit of the European Commission, following consultation of the Standing Committee on Construction at its 60th meeting on 26 October, 2004.

To draft the answer of CEN to this mandate and to develop a Work Programme, NEN proposed to set up a CEN/BT WG by submitting a CEN Form A in March 2005. Resolution CEN/BT C 025/2005 on the acceptance of the mandate M/366 and of the proposal as laid down in the Form A has been agreed by CEN members in May 2005 and CEN/BT WG 176 was created to work under the chairmanship of Mr Jeroen Bartels and with NEN for the secretariat. Based on the draft Business Plan for a new CEN/TC, CEN/BT has decided to establish a new CEN/TC, with the number 351 (CEN/BT Resolution C049/2005).

Title of the CEN/TC
Construction Products: Assessment of Release of Dangerous Substances

Scope of the CEN/TC
Development of horizontal standardized assessment methods for harmonised approaches relating to the release (and/or the content when this is the only practicable or legally required solution) 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
The first meeting of CEN/TC 351 has taken place 19-21 April 2006. This was 3 months later than originally foreseen, due to the time the financial procedures have taken. The time schedule of the first set of work items in the work programme and in the quotation is adapted accordingly.

BUSINESS ENVIRONMENT OF THE CEN/TC

Policies, Economics, Dynamics

According to the European Commission COM(2004)60 "Towards a thematic strategy on the urban environment" buildings and the built environment use 50% (measured by weight) of the materials taken from the Earth's crust. During their life cycles buildings comprise the largest energy-consuming sector in Europe with almost half of the primary energy used. This is linked to the fact that buildings generate 35 % of all greenhouse gas emissions in Europe. In addition waste from building materials, during the construction and demolition stages are the source of 25 % of all waste generated in Europe. The building sector also has a major economic impact, which has traditionally been the main economic background of the European countries. The construction industry in total accounts for about 10 % of the GDP of the EU. Furthermore, in the majority of the European countries buildings constitute over half of the national wealth.

Several substances are classified as dangerous to the environment and human health. Moreover, from a viewpoint of precaution, some national legislations require thorough studies before new materials or products that contain these substances are introduced. In order to consider the importance and common interest of Member States, a database with national regulations has been developed[2] indicating the banned and regulated dangerous substances that have priority in respect of ER3 of the CPD.

2 This database with Legislation on substances in construction products can be found at http://europa.eu.int/comm/enterprise/construction/internal/dangsub/dangmain_en.htm.

The work of CEN/TC 351 is dependent on the European Commission deciding on a list of priority substances and parameters.

The release of dangerous substances from construction products in their working life needs to be quantified. This applies to the release to outdoor air, soil, surface water and groundwater and also to indoor air. In Europe, people spend almost 90 % of their time inside buildings and indoor climate has a major impact on the health and comfort of the building users. According to OECD, indoor air levels of many pollutants are 2½ times higher than outdoor levels. Although the building regulations in some Member States define the minimum health conditions for the performance of buildings, it is essential to have a European harmonized assessment methodology and indicators for health and comfort performance.

NOTE 1 Potential development of a European methodology for assessment of indoor environment of buildings on voluntary basis is in the scope of CEN/TC 350 "Sustainability of construction works".

NOTE 2 Within the framework of the REACH[3] Regulation the release of chemical substances from articles and preparations has to be assessed. Construction products are not exempted from this obligation.

Potential Technical Barriers to Trade

To prevent potential technical barriers to trade in the internal market, it is a vital condition to have a common harmonized language, i.e. a methodology with core indicators, between all stakeholders in the building sector. At the moment a number of Member States have their own formal regulations on dangerous substances. This results in different testing methods and thus in mounting costs for industry since mutual acceptance of results of testing is not possible due to the differences in test methods.

International and European Standards on Release of Dangerous Substances

Standards that are being developed in the environmental field provide guidelines for the standards that need to be developed. A first analysis shows that for almost all substances mentioned in the mandate existing test methods can be used. For release to soil, surface water and groundwater, CEN/TC 164 "Water supply" has developed many standards that can be of help or can even be extended to encompass all construction products. Also as shown in Annex 4 many leaching standards have been developed in other fields e.g. by CEN/TC 292 "Waste characterization". For the release to indoor air, CEN/TC 264 "Air Quality" has already developed horizontal test methods in the framework of the CPD and that apply to construction products.

Some product TCs have already developed assessment methods for their products or product groups, which may be applicable to almost all construction products for the same intended use and exposure scenario. Also national standards and different concepts or schemes already exist, e.g. the EOTA/UEAtc scheme for the assessment of construction products regarding the emission of VOC and SVOC.

Relevant Stakeholders

The main stakeholders in this project are the European and national authorities (as the CPD determines the scope of the project and this directive is an instrument for harmonising existing legislative requirements). The fields of regulation are not limited to the construction field but do also include the environmental field and health and safety regulations as stated in ER 3 of the CPD.
Figure 2 shows the stakeholders that are primarily related to the standardization process of CEN/TC 351.

Availability of resources

Both in the preparation of the mandate and in the participation in the CSN Project on Environment (CSNPE) a number of representatives from different Member States have shown interest. A preliminary request from NEN to National Standardization Bodies regarding the participation in

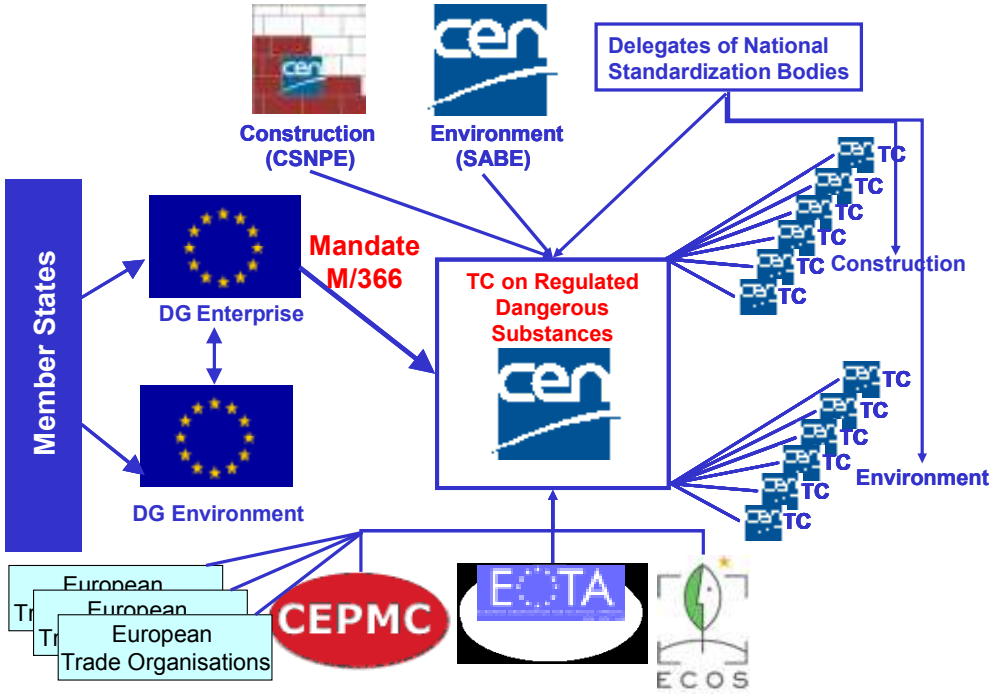
3 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals.

WGs has shown that not only participation but also the willingness to take on the responsibility for the convenership of Working Groups is looked upon favourably. DIN and AFNOR have offered to have the convenership for the 2 proposed WGs. Together with the offer from NEN to hold the secretariat of the CEN/TC, the management of the process is already assured.
The potential interest in the work was also shown by the participation of 34 experts from 11 countries and 5 liaison organisations that attended the meeting of CEN/BT WG 176 in June 2005.

BENEFITS EXPECTED FROM THE WORK OF THE CEN/TC

The output from CEN/TC 351 will provide the means for the quantification of dangerous substances which may be released from construction products and for understanding the applicability of such standards in regulations.

The standards will provide essential elements in a strategy leading to the mitigation and possibly, the avoidance of the exposure to dangerous substances that may be released from construction products. Also it is foreseen to provide input on the use of standards and on the systematic approach of the testing strategy in order to ensure an appropriate level of protection in a cost effective way. In addition to the above, potential barriers to trade can be avoided by the use of these standards. In fact a TR is to be developed to describe existing barriers to trade. The standards will support the ER3 of the CPD as well as other EU policies, such as Integrated Product Policy (IPP), the Sixth Community Environment Action Programme (6EAP) and the forthcoming REACH Regulation.



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CEPMC = Council of European Producers of Materials for Construction
ECOS = European Environmental Citizens' Organisation for Standardization
EOTA = European Organisation for Technical Approvals

Figure 2 – Network of involved parties

PARTICIPATION IN THE CEN/TC

All the CEN national members are entitled to nominate delegates to CEN Technical Committees and experts to Working Groups, ensuring a balance of all interested parties. Participation as observers of recognized European or international organisations e.g. CEPMC and FIEC is also welcomed. Furthermore, liaisons with product TCs, other relevant CEN/TCs and EOTA Working Groups are necessary to provide means of communication and avoid double work. Participation in the activities of this CEN/TC will be via the national standards organisations in the CEN member countries.

The need for co-ordination with Technical Committees and EOTA Working Groups, where it is known that some committees, e.g. CEN/TC 134 on floorings and CEN/TC 112 on wood based panels, are already developing methods for testing, is required and is anticipated in the budgeting.

OBJECTIVES OF THE CEN/TC AND STRATEGIES FOR THEIR ACHIEVEMENT

Defined objectives of the CEN/TC

The objective of CEN/TC 351 is to develop the standards, finalise the validation process for the standards and provide the Technical Reports mentioned in Mandate M/366. The required documents are described in the annexes to the mandate. The Mandate defines a number of Work Packages. These are:

Work Package 1: Technical reports: procedures for testing and testing schemes;
Work Package 2: Horizontal standards complementing the existing sampling standards of construction products for the determination of content or emission of regulated dangerous substances;
Work Package 3: Horizontal standards: content of regulated dangerous substances in construction products;
Work Package 4: Horizontal standards: release[4] scenarios to soil, groundwater and surface water;
Work Package 5: Horizontal standards: emission scenarios into indoor air.

The Work Programme is attached as Annex 1.
Annex 2 contains more information on the scope of the Work Items, the relation with the items mentioned in Mandate M/366 and additional information and remarks on the work items and work packages.
CEN/TC 351 decided that Technical Specifications awaiting validation may be published, but no EN will be published, until the validation is completed satisfactorily.

Identified strategies to achieve the CEN/TCs defined objectives

After acceptance of the Work Programme by the Commission the work on the work packages will take place in parallel.

- Task Groups will deal with the TRs of Work Package 1 (Work Items 1 to 4) and of Work Package 2 (Work Item 5);
- Working Group 1 on Soil, Groundwater and Surface Water will deal with Work Packages 3 and 4 (Work Items 6 to 8);
- Working Group 2 on Indoor Air will deal with Work Packages 3 and 5 (Work Items 6 and 9 to 11 and possibly 12).

Drafting of the TRs can be contracted when sufficient financial resources are available. The TRs will be discussed in CEN/TC 351 before they are submitted for comments to the national mirror committees.

4 The text in Mandate M/366 is 'emission scenarios to soil, groundwater and surface water'; this is not correct as emission refers to indoor air specifically.

The common procedure for drafting standards will be followed. First an inventory is made of existing standards and national methods. Then the experts of the working groups develop drafts, which need consensus in the relevant working group before being discussed in CEN/TC 351 and the national mirror committees.

Since validation (in terms of robustness and variability-uncertainty) is crucial for the applicability of horizontal standards to product groups and in order that the quality of the standards is fit for purpose, dedicated tests are used for validating the draft standards. Only if results are regarded to be adequate for the preset requirements, standards are submitted for voting. Regarding the use of International standards (ISOs) as source documents, and European standards (ENs) as supporting tools, liaisons and co-operation with the relevant CEN and ISO committees, as well as with European or international relevant organisations, will be set up. The end objective of CEN/TC 351 is the provision of ENs, within the agreed timescale for the elaboration of the ENs. This requires the draft standards to be ready within 2-3 years after receipt of the mandate by CEN.

FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE CEN/TC WORK PROGRAMME

The following factors could negatively impact the completion or business community acceptance and use of the CEN/TC's standards:

- The aim for horizontal standards involves a wide consensus. Such a process might take longer than traditional development of European standards. However, since so many standards are already available, the time for developing a draft standard can be greatly reduced.
- The process is depending on the resources available both in experts and funding of the validation process. If sufficient funding is available, reports can be contracted thus reducing the time to generate draft standards and/or Technical Reports.
- The number of stakeholders requires laying emphasis on communication. It is very important to invest in open lines of communication; thorough and timely information transfer will enhance acceptance very much. The funding required by this is normally not part of the standardization process, but is greatly improving the success.
- The standards will concern all of the stakeholders involved in building construction, the most important (in this case) being building material suppliers, raw material suppliers, product manufacturers, constructors, certification bodies, consumers, architects and designers.
- The standards should be of European relevance; lack of expertise could affect the acceptance and effective use of the CEN/TCs standards.
- Each test method requires validation. If validation shows that a particular test method doesn't meet the criteria for the methods, then there inevitably will be delay in publication of the EN.
- The work of CEN/TC 351 is dependent on the European Commission deciding on a list of priority substances and parameters. If the delivering of this list is delayed, the proposed target dates have to be reconsidered.
  The Work Programme as indicated in this Business Plan was based on the substances mentioned in Annex 3, in order to develop the budget.

STRUCTURE OF THE CEN/TC

To progress the proposed programme of work, two working groups are needed:
- one aims at the release to soil, surface water and groundwater and
- one aims at the emission into indoor air.

These two Working Groups will work closely with product TCs and with the relevant TCs from the CEN Environment Sector.

Furthermore, five Task Groups are required to provide the Technical Reports and for the co-ordination of the work. These will have a limited time for the production of the TRs and will work closely with the secretariat of CEN/TC 351.

All groups will report to CEN/TC 351.

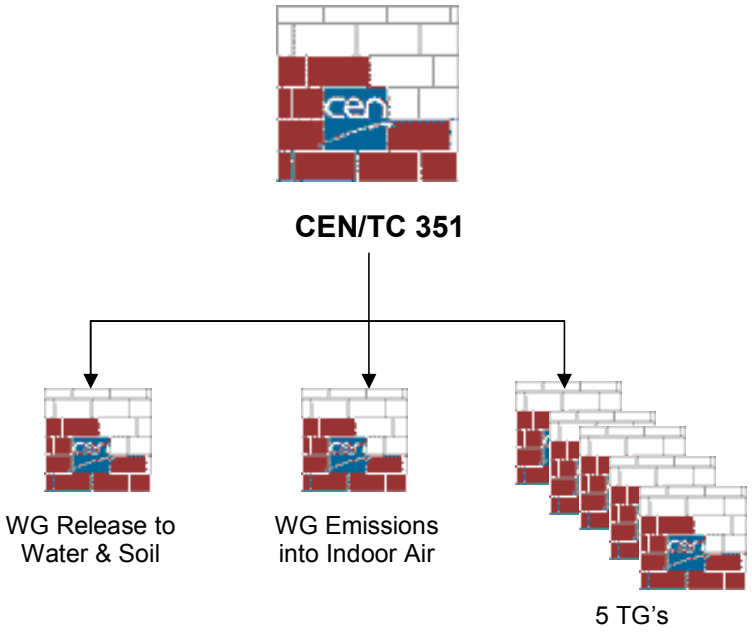

Figure 3 – Proposed structure for CEN/TC 351

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 April 1st, 2006, the following target dates are identified in the table. The mandate considers a time frame until 2010.

Remark of the secretary: We expected that the contracts between CEN and the European Commission were signed well before the meeting of CEN/TC 351 in April 2006. This contract will also include a time schedule. That schedule will then overrule the target dates mentioned here.

Note: The last column ("related standards") gives for each WI the reference N° in the list of Annex 4 of this document for available/related standards. In this version of the Work Programme and the Business Plan, this list is still preliminary and needs to be complemented especially with the standards developed by CEN/TCs on construction products as well as with the "analytical" standards corresponding to the regulated dangerous substances to be informed by the Commission.

ID	*Title*	*Scope*	*Sta-tus*	*Target dates*	*Related standards*
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 CEN/TC 351.	TR	Final Draft: 2007-03-31 Publication: 2007-09-30	No standards available

BUSINESS PLAN
CEN/TC 351 "Construction products: Assessment of release of dangerous substances"

ID	*Title*	*Scope*	*Sta-tus*	*Target dates*	*Related standards*
WI 2	Construction Products – Assessment of release of dangerous substances – The concept of horizontal testing procedures	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 Papers[5], in particular Guidance Papers H and M. 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 and EOTA Working Groups 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 Conformity[6].	TR	Final Draft: 2007-06-30 Publication: 2007-12-31	2-01 in Annex 4
WI 3	Construction Products – Assessment of release of dangerous substances – Methodologies for "Without Testing (WT)" and "Without Further Testing (WFT)"	This Technical Report (TR) develops a methodology for identifying products as Without Testing (WT) and Without Further Testing (WFT).	TR	Final Draft: 2007-06-30 Publication: 2007-12-31	No standards available

5 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".

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

BUSINESS PLAN
CEN/TC 351 "Construction products: Assessment of release of dangerous substances"

ID	*Title*	*Scope*	*Sta-tus*	*Target dates*	*Related standards*
WI 4	Construction Products – Assessment of release of dangerous substances – Use of harmonised horizontal assessment methods	This Technical Report (TR) provides step-by-step guidance for product Technical Committees (TCs) and EOTA Working Groups (WGs), on how the harmonised measurement/test methods can be integrated into technical specifications. Note: The TR will be drafted in close co-operation with product TCs.	TR	First Draft: 2007-03-31 Final Draft: 2009-03-31 Publication: 2009-09-30	No standards available
WI 5	Construction Products – Assessment of release of dangerous substances – Sampling and sampling plans for harmonised test specifications	This TR describes the issue of sampling for the determination of content or release or emission of regulated dangerous substances, related to the scenarios of intended use, complementing the existing product standards, ETAGs and CUAPs, as far as sampling is concerned . Note: Based on the results described in this TR, specific decisions regarding the need for an additional standard will be made.	TR	Start date: 2007-03-01 Formal Vote 2008-03-31 Publication: 2008-09-30	5-01 down to 5-16 in Annex 4

BUSINESS PLAN
CEN/TC 351 "Construction products: Assessment of release of dangerous substances"

ID	Title	Scope	Sta-tus	Target dates	Related standards
WI 6	Construction Products – Assessment of release of dangerous substances – Content of regulated dangerous substances in construction products	This horizontal standard[7] 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. 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. Note 2: Analysis of content may include non-destructive and destructive methods for potential release of dangerous substances. Analysis of extracts resulting from destructive methods are analysed according to the standards coming from WI 8 and/or WI 10. Note 3: The procedures described in WI 6 and WI 8 or 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, pre-treatment, extraction, analysis and reporting).	EN TR	Start date: 2007-04-01 Publication (TS): 2008-09-30 Start of validation: 2008-09-30 Validation/reporting: 2010-09-30 TC enquiry: 2010-09-30 Formal Vote: 2011-03-31 Note: the end of the validation includes a draft for the EN First Draft: 2007-03-31 Final Draft: 2007-09-30 Publication: 2008-03-31	6-01 down to 6-16 in Annex 4 6-01 down to 6-16 in Annex 4

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

BUSINESS PLAN
CEN/TC 351 "Construction products: Assessment of release of dangerous substances"

ID	*Title*	*Scope*	*Sta-tus*	*Target dates*	*Related standards*
WI 7	Construction Products – Assessment of release of dangerous substances – Leaching methods	This horizontal standard[8] describes the leaching methods producing eluates for subsequent analysis of regulated dangerous substances and parameters from construction products. 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).	EN	Start date: 2007-04-01 Draft approved by TC: 2008-03-31 Start of validation: 2008-04-01 Validation/reporting: 2010-03-31 TC enquiry: 2010-03-31 Formal Vote: 2010-12-31 Note: the end of the validation includes a draft for the EN	7-01 down to 7-54 in Annex 4
WI 8	Construction Products – Assessment of release of dangerous substances – Eluate and extract analysis	This horizontal standard[8] 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. 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).	EN	Start date: 2007-04-01 Draft approved by TC: 2008-03-31 Start of validation: 2008-04-01 Validation/reporting: 2019-03-31 TC enquiry: 2010-03-31 Formal Vote: 2010-12-31 Note: the end of the validation includes a draft for the EN	8-01 down to 8-31 in Annex 4

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

BUSINESS PLAN
CEN/TC 351 "Construction products: Assessment of release of dangerous substances"

ID	*Title*	*Scope*	*Sta-tus*	*Target dates*	*Related standards*
WI 9	Construction Products – Assessment of release of dangerous substances – Methods for generation of emission into indoor air	This horizontal standard[9] describes the methods for generation of emission of dangerous substances from construction products into indoor air in standardized testing facilities. 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).	EN	Start date: 2007-04-01 Draft approved by TC: 2007-09-30 Start of validation: 2007-09-30 Validation/reporting: 2009-09-30 TC enquiry: 2009-09-30 Formal Vote: 2010-06-30 Note: the end of the validation includes a draft for the EN	9-01 down to 9-08 in Annex 4
WI 10	Construction Products – Assessment of release of dangerous substances – Analysis of emissions into indoor air	This horizontal standard[9] describes the measurement of regulated dangerous substances in indoor air samples as generated from construction products in standardized testing facilities. 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).	EN	Start date: 2007-04-01 Draft approved by TC: 2007-09-30 Start of validation: 2007-09-30 Validation/reporting: 2009-09-30 TC enquiry: 2009-09-30 Formal Vote: 2010-06-30 Note: the end of the validation includes a draft for the EN	10-01 down to 10-16 in Annex 4

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

BUSINESS PLAN
CEN/TC 351 "Construction products: Assessment of release of dangerous substances"

ID	*Title*	*Scope*	*Sta-tus*	*Target dates*	*Related standards*
WI 11	Construction Products – Assessment of release of dangerous substances – Measurement of radiation	This horizontal standard[10] describes the measurement of radiation and radioactive emissions from construction products. 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.	EN	Start date: 2008-04-01 Publication (TS): 2009-09-30 Start of validation: 2009-09-30 Validation/reporting: 2011-09-30 TC enquiry: 2011-09-30 Formal Vote: 2012-03-31 Note: the end of the validation includes a draft for the EN	11-01 down to 11-05 in Annex 4
WI 12	Construction Products – Assessment of release of dangerous substances – Assessment for potential growth of relevant micro-organisms	This horizontal standard[10] describes the assessment for potential growth of relevant micro-organisms on construction products in the indoor environment. 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.	EN	Start date: 2008-04-01 Publication (TS): 2009-09-30 Start of validation: 2009-09-30 Validation/reporting: 2011-09-30 TC enquiry: 2011-09-30 Formal Vote: 2012-03-31 Note: the end of the validation includes a draft for the EN	12-01 down to 12-4 in Annex 4

10 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 – RELATIONS BETWEEN WORK ITEMS, MANDATE M/366 AND ADDITIONAL INFORMATION AND REMARKS

This Annex to the Draft Business Plan of CEN/TC 351 gives the relations to the Work Items in Annex 1 (of both the Work Programme and the draft Business Plan), the Work Packages as stated in Mandate M/366 and some additional information and remarks, made by CEN/BT WG 176 during the meeting on June 22-24, 2005, in Gouda, The Netherlands.
Mandate M/366 contains additional requirements specified in the main part of the mandate and in the annexes. In particular the mandate calls for validation of the measurement-testing standards and require that they are published as CEN/TS when validation has not been performed.

Work Package 1: technical reports: procedures for testing and testing schemes

1. Technical Report on barriers to trade

Scope WI 1
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 CEN/TC 351.

Note 1
This refers to M/366: Technical Report on examples of existing and potential barriers to trade in relation with emission of regulated dangerous substances into indoor air, surface water, ground water or soil.

Note 2
This is going to be achieved by:
- Reviewing relevant regulations (EC database);
- Consulting industry;
- Consulting product TCs and EOTA groups.

CEN/TC 351 approves the TR and the available information on indications for the technical barriers to trade. The following points are to be reviewed:
- Which barriers to trade exist;
- How barriers to trade can be resolved by technical specifications;
- Position of involved product TCs and EOTA WGs.

CEN/TC 351 approves the TR.

2. Technical Report on the concepts of horizontal testing procedures

Scope WI 2
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 Papers[11], in particular Guidance Papers H and M.

11 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".

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 and EOTA Working Groups 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 Conformity[12].

Note 1
This refers to M/366: Technical Report on the concept of horizontal testing procedures (other than WFT products).

Note 2
The testing procedures address the following questions:
1. For which products are measurement/testing schemes relevant?
2. How to define clusters of products that behave similarly in release tests (release scenario)?
3. For which substances or products is the measurement/test of the content relevant?
4. How to combine individual measurement and test methods to an appropriate test programme to allow the determination of the relevant properties and to allow for the assessment of the results in terms of performance?
5. How to link the results of the harmonised methods to the related requirements (hierarchy and status)?

The report includes the mechanism by which required amendments of horizontal standards or in special cases vertical standards are identified for specific products or product groups. In particular it identifies the procedures and limitations for amending horizontal standards and describes the justification process for vertical standards. Attention is given to the harmonization of the general intended conditions of use (scenarios) as well as to the required specific conditions of use for certain products.

CEN/TC 351 approves the TR.

3. Technical Report on Methodologies for "Without Testing (WT)" and "Without Further Testing (WFT)"

Scope WI 3
This Technical Report (TR) develops a methodology for identifying products as Without Testing (WT) and Without Further Testing (WFT).

Note 1
This refers to M/366: Technical Report on "Without Testing (WT)" and "Without Further Testing (WFT)".

Note 2
The mandated Technical Report should make it possible for the European Commission expert group on Dangerous Substances in the field of Construction Products to develop and implement procedures for the selection, approval and control of these products, with the endorsement of the Standing Committee on Construction.

The TR will contain a decision tree for WT/WFT/FT procedures (reference to Guidance Paper M, 3.4).

The TR considers the viability of two lists, i.e.
a) Products or materials regarded as WT based on the generally accepted knowledge on the constituents and the release behaviour;
b) Products regarded as WFT based on the generally accepted knowledge on the constituents and the release behaviour or based on verifications of their release or content of regulated dangerous substances (measured/tested according to the harmonised measurement/test standards).

Construction products that are not on one of the lists mentioned are regarded as Further Testing (FT).

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

Since industry regards this TR of the highest importance, they ask the work on this TR to start as soon as possible.

CEN/TC 351 approves the TR.
After approval by the European Commission a transfer of the TR in TS may be considered.

4. Technical report on the use of harmonised horizontal test methods

Scope WI 4
This Technical Report (TR) provides step-by-step guidance for product Technical Committees (TCs) and EOTA Working Groups, on how the harmonised measurement/test methods can be integrated into technical specifications.

Note 1
This refers to M/366: Technical Report on how to use standardized test methods as developed under the mandate in harmonised product standards, European Technical Approval Guidelines (ETAGs) and Common Understanding Assessment Procedures (CUAPs).

Note 2
The TR will be drafted in close co-operation with product TCs and EOTA WGs.

The TR suggests how the attestation of conformity of the products will be dealt with in the CE marking and makes recommendations regarding relevant systems for the Attestation of Conformity. The TR describes the possibilities and limitations of the use of the testing schemes described in the TR 2 on the concept of horizontal testing procedures. Although each standard already contains the field of application, this TR expands on that by addressing issues regarding the testing schemes and the ability of measurement methods to fulfil the requirements of the regulator. The TR should be used by the product TCs when amending standards and is intended to be applicable by the European Commission to develop recommendations and guidelines concerning the reporting of the test results in regard to CE marking.

CEN/TC 351 approves the TR.

Work Package 2: horizontal standards for sampling and sampling plans for harmonised test specifications

Scope WI 5
This TR describes the issue of sampling for the determination of content or release or emission of regulated dangerous substances, related to the scenarios of intended use, complementing the existing product standards, ETAGS and CUAPs, as far as sampling is concerned .

Note 1
This refers to M/366: Horizontal standard complementing the existing sampling standards of construction products for the determination of content or release or emission of regulated dangerous substances.

Note 2
Based on the results described in this TR specific decisions regarding the need for an additional standard will be made.

Note 3
Since the statistical analysis of sampling is regarded as a specific area, different from the analytical procedure, a separate standard for sampling is required, which deals with the quality characteristics of sampling and the overall sampling strategy. This sampling standard deals with one of the steps of the overall measurement/test method to be standardized, which includes among others sampling, sample preparation, analysis and reporting.

CEN/TC 351 approves the TR.

Work Package 3: horizontal standards: content of regulated dangerous substances in construction products

Scope WI 6

This horizontal standard[13] 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.

Note 1
This refers to M/366: Horizontal standard on the measurement of the content of regulated dangerous substances and particles in construction products.

Note 2
The specific list of substances will depend on the screening of the database. Since already many methods are available or in development (a.o. in project HORIZONTAL), the work within this Work Package will focus on the special requirements for sample digestion of construction products to the extent not covered by existing methods and insufficiently covered parameters.

Note 3
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.

Note 4
Analysis of content may include non-destructive and destructive methods for potential release of dangerous substances. Analysis of extracts resulting from destructive methods are analysed according to the standards coming from WI 8 and/or WI 10.

Note 5
The procedures described in WI 6 and WI 8 or 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, pre-treatment, extraction, analysis and reporting).

Work Package 4: horizontal standards: release scenarios to soil, groundwater and surface water

1. Horizontal standard on leaching

Scope WI 7

This horizontal standard[13] describes the leaching methods producing eluates for subsequent analysis of regulated dangerous substances and parameters from construction products.

Note 1
This refers to M/366: Horizontal standards on the generation of the release of regulated dangerous substances from construction products into soil, surface water and groundwater in standardized testing facilities.

Note 2
This standard takes into account the background information as described in the mandate. When developing and validating such standards, in a first step, consideration is given to the different product families covering the different matrices and different morphology of materials. In a second step, consideration is given to the different families of substances addressed in the mandate. General conditions, linked to scenarios of intended use are used to specify conditions under which the release is generated, must be clearly specified. Particular release conditions may be needed for specific intended conditions of use of certain product families. This standard provides for methods applicable for routine testing and those for specific characterization testing programmes.

Note 3
The procedures described in WI 7 end 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).

Selection of the appropriate leaching method is depending on the intended condition of use and the relevant scenario (including parameters).

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

2. Horizontal standards on the analysis of the eluate

Scope WI 8
This horizontal standard[14] 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.

Note 1
This refers to M/366: Horizontal standards on the measurement/test of the release of regulated dangerous substances from construction products into soil, ground water and surface water as generated in the standardized testing facilities, and of relevant properties of the release.

Note 2
The list of substance groups to be considered needs to be detailed depending on the screening of the database. In the framework of the mandate the Commission will provide a precise list of substances in due course. In the absence of this list, the work will start with developing a provisional list of substances based on Technical Report 1 (on barriers to trade) as a basis for the development of the standards.

Note 3
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).

This standard shall be horizontal in that it is – as far as practicable - either the standard applied for or applicable for the measurement of the concerned substance in surface water, ground water and soil or methods specifically developed for eluates.

This standard should provide for methods applicable for routine testing and those for specific characterization testing programmes, such as Initial Testing (IT).

Work Package 5: horizontal standards: emission scenarios in indoor air

1. Horizontal standard on the methods for generation of emission into indoor air

Scope WI 9
This horizontal standard[14] describes the methods for generation of emission of dangerous substances from construction products into indoor air in standardized testing facilities.

Note 1
This refers to M/366: Horizontal standard on the generation of emission from construction products into indoor air in standardized testing facilities.

Note 2
This standard is based on standardized testing facilities described in existing test methods for the generation of emissions by means of test chamber, test cell, etc. When developing and validating the standard, consideration is given to the different families of substances addressed in the mandate. General conditions under which the emission is generated are clearly specified. Particular emission conditions may be needed for specific intended conditions of use of certain product families. This standard provides for methods applicable for routine testing and those for specific characterization testing programmes.

Note 3
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).

2. Horizontal standards on the analysis of emissions into indoor air

Scope WI 10
This horizontal standard[14] describes the measurement of regulated dangerous substances in indoor air samples as generated from construction products in the standardized testing facilities.

Note 1
This refers to M/366: Horizontal standards on the measurement of the emission of substances from construction products into indoor air as generated in the standardized testing facilities.

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

Note 2
This standard provides for methods for the measurement/testing, in the standardized testing facilities as described in existing test methods, of the quantities emitted from the tested construction product into indoor air.

Note 3
The standard is applicable for routine testing and for specific characterization testing programmes, such as Initial Testing (IT). The standard is horizontal in that it is either the standard applied for or applicable for the measurement of the concerned substance released into indoor air, or of the relevant properties of this release.

Note 4
The list of substance groups to be considered needs to be detailed depending on the screening of the database. In the framework of the mandate the Commission will provide a precise list of substances in due course. In the absence of this list, the work will start with developing a provisional list of substances based on Technical Report 1 as a basis for the development of the standards.

Note 5
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).

3. Horizontal standard on the measurement of radiation

Scope WI 11
This horizontal standard[15] describes the measurement of radiation and radioactive emissions from construction products.

Note 1
This refers to M/366: Horizontal standard on the measurement of radiation from construction products.

Note 2
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.

Note 3
For the preparation of this horizontal standard Radiological Protection Principles concerning the Natural Radioactivity of Building Materials Radiation Protection shall be taken into account.

In the framework of the mandate the Commission will provide clarity on the issue of radiation in due course. In the absence of this, the work cannot start.

4. Horizontal standard on assessment for potential growth of relevant micro-organisms

Scope WI 12
This horizontal standard[19] describes the assessment for potential growth of relevant micro-organisms on construction products in the indoor environment.

Note 1
This refers to M/366: Horizontal standard on the indoor conditions for growth of micro-organisms.

Note 2
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.

In the framework of the mandate the Commission will provide clarity on the issue of conditions for growth in due course. In the absence of this, the work cannot start.

If no test methods are available, these are not developed under the mandate. In this case a project under the umbrella of pre- and co-normative research could be started.

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

ANNEX 3 – PRELIMINARY LIST OF REGULATED 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 standardized.
For several of the parameters methods are adequately developed to assess release. Especially 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.

ANNEX 4 – PRELIMINARY LIST OF EXISTING STANDARDS

NB This Annex is missing in this version of the Business Plan of CEN/TC 351.

In the present version of the Work Programme this list is not yet complete. It will be complemented especially regarding the relevant standards already developed in several TCs on construction products, as well as with regards to measurement standards in air and in water of dangerous substances when documented by the European Commission.

This list has been prepared in accordance with the requirements of the mandate M/366 as well as the usual standardization procedures.

This list is split in 12 sub-lists corresponding to the 12 Work Items. For easy cross-reference, in each sub-list, each quoted standard or document is given a number starting with the number of the WI (e.g. for WI 5: 5.01).

Pages 2 to 3 deal with WI 1 – WI 2 – WI 3 – WI 4 Technical Reports

Pages 4 to 10 deal with WI 5 Complements sampling plan and sampling

Pages 10 to 14 deal with WI 6 Content measurements

Pages 14 to 35 deal with WI 7 Leaching methods

Pages 35 to 42 deal with WI 8 Water measurements

Pages 42 to 45 deal with WI 9 Indoor air emission

Pages 45 to 52 deal with WI 10 Air measurements

Pages 52 to 53 deal with WI 11 Radiation measurements

Pages 53 to 54 deal with WI 12 Potential growths of micro-organisms