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# CEN/TR 18043

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English Version

# Construction products: Assessment of release of dangerous substances - Pros and cons of methods for communicating the potential release of dangerous substances into soil, groundwater or surface water and indoor air

Produits de construction: Évaluation de l'émission de substances dangereuses - Avantages et inconvénients des méthodes de communication de l'émission potentielle de substances dangereuses dans le sol, les eaux souterraines ou les eaux de surface et dans l'air intérieur

Bauprodukte: Bewertung der Freisetzung von gefährlichen Stoffen - Vor- und Nachteile von Verfahren zur Kommunikation der möglichen Freisetzung von gefährlichen Stoffen in den Boden, das Grund- oder Oberflächenwasser und die Innenraumluft

This Technical Report was approved by CEN on 5 February 2024. It has been drawn up by the Technical Committee CEN/TC 351.

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## European foreword

This document (CEN/TR 18043:2024) 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

# Introduction

Since 1 July 2013, the Construction Products Regulation (CPR) is fully in force replacing the former Construction Products Directive (CPD). The goals of the Regulation are the same as those of the Directive: to foster the free movement and use of construction products in the internal market.

The CPR requires, *inter alia*, the implementation of Basic Work Requirement No 3 on Hygiene, Health and Environment into harmonized product standards. Such requirements are not new and known to construction products also under the former Construction Products Directive (CPD). In single countries in Europe, manufacturers of construction products are required by law to comply with limits for the potential release of dangerous substances. These limits are notified and therefore existing.

The implementation of BWR3 into harmonized product standards (hEN) under the CPR is very much depending on horizontal European test standards, which are under development by CEN/TC 351. They will replace the test procedures used by now in national regulations regarding BWR3. The horizontal test procedures for BWR3 today are published as CEN/TSs and will be available as EN in autumn 2023. As a result, the implementation will need to be considered in the revision of harmonized product standards.

According to Article 6 (d) of the CPR the results can be expressed by “levels”, “classes” or in a “description”. Due to existing requirements with limit values in the Member States the expression of results via levels or classes will result in long lists of regulated substances compared to relatively small lists of technical parameters. The use of descriptions for the communication of results on BWR3 is unlikely to be accepted due to the nature of existing requirements with limit values on content and release.

The options for declaring results on BWR3 will impact the competition of construction products as not for all materials requirements exist or are not required for regular testing in the single Member States, and unified limits are not likely to be defined by the EC. Only in one Member State all construction products need to be tested. Results on BWR3 are provided in all Member States in a neutral format, mostly in form of a test report, which allow an acceptable proof of performance on one hand and non-stigmatizing information on the other hand.

The examples in this report are based on requirements for fly ash for concrete based on preparatory work in CEN/TC 104/WG 4 to implement BWR3 requirement for release into soil and ground into the harmonized standard. For the communication of test results it serves as an example for all construction products with testing needs due to existing requirements.

This report is to inform about pros and cons of communication systems as defined in the CPR by focusing political, technical and market related aspects with political aspects covering requirements on EU and national level, technical aspects dealing with test procedures and markets aspects dealing with fulfilling legal requirements (parameters, test procedures) and offering materials to customers. When the single actors (EC on CPR; CEN/TC 351 on horizontal test procedures; Member States on requirements) are legally correct and consistent in itself, the outcome of all works will result in distortion of markets and acceptance problems of well-known resources.

# 1 Scope

This document describes the pros and cons for the different methods for reporting the potential release of dangerous substances into soil, groundwater or surface water and indoor air, which are:

— level (or declared values); and

— classes;

as defined in the Construction Products Regulation (CPR).

In addition, the pros and cons of additional methods based on discussion in CEN/TCs and WGs are described, which are:

— categories; and

— manufacturer's declaration.

# 2 Normative references

There are no normative references in this document.

# 3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at https://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

# 4 Political aspects

## 4.1 Construction Products Regulation

The Construction Products Regulation's (CPR) Basic Work Requirement 3: *Hygiene, health and the environment*, states the construction works must be designed and built in such a way that they will, throughout their life cycle, not be a threat to the hygiene or health and safety of workers, occupants or neighbours, nor have an exceedingly high impact, over their entire life cycle, on the environmental quality or on the climate during their construction, use and demolition, in particular as a result of any of the following:

a) the giving-off of toxic gas;

b) the emissions of dangerous substances, volatile organic compounds (VOC), greenhouse gases or dangerous particles into indoor or outdoor air;

c) the emission of dangerous radiation;

d) the release of dangerous substances into ground water, marine waters, surface waters or soil;

e) the release of dangerous substances into drinking water or substances which have an otherwise negative impact on drinking water;

f) faulty discharge of waste water, emission of flue gases or faulty disposal of solid or liquid waste;

g) dampness in parts of the construction works or on surfaces within the construction works.

The CPR states further that the declaration of performance must: