CONSTRUCTION PRODUCTS EUROPE

# Construction Products Europe position paper 06.07.2016 Implementation of Basic Safety Standard Directive and assessment of radiation from construction products

## Background

Council Directive 2013/59/EURATOM of 5 December 2013[i] addresses the following issues:

**Radon exhalation from building materials**

Articles 54 "Indoor exposure to radon"[ii] and 103 "Radon action plan"[iii] of the Directive request the development of national reference levels for indoor radon concentrations and also a national action plan addressing long-term risks from radon exposures in buildings. In all cases the maximum national reference level for all buildings is already fixed (300 Bq.m-3) independently of the source of the radon.

**Gamma radiation**

Article 75 "Gamma radiation from building materials"[iv] and Annex VIII of the Directive address the determination of three radionuclides of gamma radiation for building materials (usually called construction products).



Member States have four years to transpose and implement this directive and according to the EURATOM treaty, previously they must communicate to the Commission their existing and draft provisions. The Commission will then make appropriate recommendations for harmonising the provisions amongst Member States.

Regulation (EU) 305/2011[v] , the construction products regulation (CPR), establishes harmonised conditions for the marketing of construction products and contains relevant provisions related to the assessment of construction products. The declaration of performance of construction products is based on harmonised standards developed by CEN technical committees. In particular radiation is addressed by CEN/TC 351 "Construction Products - Assessment of release of dangerous substances" and its working group 3 "Radiation from construction products".

## Proposal

**Radon exhalation from building materials**

Taking into account that Member States decided not to deal with this issue in the screening process, (they will only address gamma radiation) Construction Products Europe considers that the implementation of the Directive should be based on the development of national action plans and should include identification of building materials with significant radon exhalation[vi] as described in the legal text.

Construction Products Europe recommends Member States to develop and promote radon concentration-reducing measures to be applied to dwellings in areas where natural radon exhalation from the soil is known to be significant and to dwellings made of building materials with significant radon exhalation.

The work of CEN/TC 351 WG3 is also relevant. The group reported to the European Commission that "the assessment of radon is still on hold for lack of regulations and matured methods".

**Proposal:** Member States should develop their national plans focusing on the identification of dwellings with radon concentration exceeding the reference levels and promote best practice concentration-reducing measures for them. In addition they should coordinate their efforts to identify significant radon exhalation sources.

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**Gamma radiation**

Construction Products Europe recognise the high value of the technical reference documents developed by CEN/TC 351 WG3 on this important issue, in particular the following:

- prCEN/TS (WI=00351014) Construction products - Assessment of release of dangerous substances - Determination of the activity concentrations of 226Ra, 232Th and 40K using gamma-ray spectrometry: This technical specification provides procedures for all stages of the determination of the activity concentration of 226Ra, 232Th and 40K based on the principles of gamma-spectrometry. The test results reflect the radiation behaviour of the product under its intended use. In addition this document is intended to be non-product-specific in scope, with only a limited number of product-specific elements.
- prCEN/TR (WI=00351020) Construction products - Assessment of release of dangerous substances - Determination of dose assessment and classification for emitted gamma radiation: This technical report discusses approaches on gamma dose assessment. It also presents a method for calculating the external gamma dose from construction products that could be a basis for development of a harmonized European approach for estimation of gamma radiation doses caused by construction products.



**Proposal:** Where CEN/TC 351 WG3 has developed methodologies, Member States should refer to them when implementing EURATOM Directive to their national legislation, in particular for measuring gamma radiation and for the determination of dose assessment for emitted gamma radiation.

**Construction Products Europe (CPE)** is a international non-profit making association made up of national and European associations that represent small and medium-size enterprises and world-leading companies. CPE aims to promote the European construction industry, to share information on EU legislation and standardisation and to provide input in all European construction-related initiatives.

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[i] Council Directive 2013/59/EURATOM of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom.
http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013L0059&rid=6

[ii] 1. Member States shall establish national reference levels for indoor radon concentrations. The reference levels for the annual average activity concentration in air shall not be higher than 300 Bq m–3. […]

[iii] 1. In application of Article 100(1), Member States shall establish a national action plan addressing long-term risks from radon exposures in dwellings, buildings with public access and workplaces for any source of radon ingress, whether from soil, building materials or water. The action plan shall take into account the issues set out in Annex XVIII and be updated on a regular basis. […]

[iv] […] 2. For building materials which are identified by the Member State as being of concern from a radiation protection point of view, taking into account the indicative list of materials set out in Annex XIII with regard to their emitted gamma radiation, Member States shall ensure that, before such materials are placed on the market:
(a) the activity concentrations of the radionuclides specified in Annex VIII are determined, and that,
(b) information to the competent authority on the results of measurements and the corresponding activity concentration index, as well as other relevant factors, as defined in Annex VIII, are provided if requested. […]

[v] http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011R0305&from=EN

[vi] Annex XVIII (8) of the EURATOM Directive

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