

# Radon EuroCode

## Harmonized European Code of Design & Construction Practice for Radon Protection in Buildings

### **EU Council Directive 89/106/EEC ~ CEC DG Enterprise**

#### **Essential Requirement 3: Hygiene, Health & the Environment**

*'The construction works (building) must be designed and built in such a way that it will not be a threat to the hygiene or health of the occupants or neighbours.'*

1. **Harmonized Terminology** - Radon Protection in Buildings
2. **Indoor Air Quality & Radon**
  - Seepage from Subsoil into Buildings ;
  - Emissions from ...
    - Building Materials / Products ;
    - Water Supplies (fresh & recycled) ;
    - Gas Supply ;
  - Miscellaneous.
3. **Radon Measurement, Uncertainty & Reliability**
  - Natural Radon - Rn-222, Rn-220, Rn-219 ;
  - The Radon Decay Chains &  $\alpha$ ,  $\beta$ ,  $\gamma$  Activity.
  - Radon Testing & Measurement - Concepts ;
  - Measurement Uncertainty & Reliability ;
  - Radon Measurement Methods & Devices.
4. **European Union & National Legislation**
  - Consumer & Public Health Protection Generally ;
  - The 'Precautionary Principle' ;
  - Radon in Buildings - Protection of Individual Health.
  - Spatial Planning, Buildings & the 'Workplace'.
  - Legal Action/Reference/Clearance Levels ;
  - Design Levels ;
  - Target Health Level.
5. **Hazard Analysis, Risk Appraisal & Optimization**
6. **Spatial Planning** - Development Restrictions

7. **Pre-Construction Site Investigation** - New Buildings
8. **Building Investigation** - Existing Buildings
  - Historical Buildings & 1964 ICOMOS Venice Charter.
9. **Developing a Radon Protection Strategy, Radon Protection Techniques, Reliability & 'Defence-in-Depth'**
10. **Radon Related Construction Products, Product Categorization & 'Fitness for Intended Use'**
  - Link to Interpretative Document 3 ...
    - Annex IA - Air Quality ;
    - Annex II - Water Supply.
11. **Regional Variations in European Design & Construction**
  - Seismic Zones.
12. **Technical Control** - During Installation
  - Categorization of Design & Construction Execution.
13. **Monitoring Building Performance** - During Use / Occupation
14. **Competence** - Designers, Installers & Controllers
  - Training / Education + Experience.
15. **Public Awareness & Consultation**
  - 1998 UNECE Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters ;
  - CEC Communication COM(2002) 704 final : Towards a Reinforced Culture of Consultation and Dialogue - General Principles and Minimum Standards for Consultation of Interested Parties by the Commission.
16. **Decision Support Tools**
  - Radon Risk Mapping.

# Radon EuroCode Format

## 'New Approach' to Technical Harmonization & Standardization (EU Council Resolution 85/C 136/01)

A Harmonized EuroCode is intended for the guidance and use of 'competent persons' only.

It is a concise document. It is not a design manual.

Regional variations in design and construction practice must be taken into account. Seismic zones will require special consideration.

Explanatory text in the Radon EuroCode will be important.

A Harmonized EuroCode provides design principles and operational rules for application.

The Principles, denoted as (P) in the text, comprise general statements, requirements and definitions for which no alternative is permitted, unless specifically stated.

The Application Rules, denoted as (A) in the text, are generally recognized rules which follow the statements and satisfy the requirements in the Principles. If, for a particular design, it is desired to use an alternative design rule which differs from the Application Rules given in the document, this may be done provided that the necessary justification is produced to show that the alternative rule complies with the Principles.

## Supporting Documents

Harmonized European Product, Performance & Test Standards - CEN  
European Technical Approvals (ETA's)  
[ European Agrément Certificates ]

National Standards

National Agrément Certificates

Regional Design Manuals in Local Languages