What is Radon (Rn)?

Radon (Rn) is a naturally occurring radioactive gas formed from the decay of uranium in rocks and soil. It is colourless, odourless, and tasteless, making it undetectable without specialised equipment. Radon can seep into buildings through cracks in floors, walls, and foundations, accumulating to harmful levels indoors. Prolonged exposure to high concentrations of radon is the second leading cause of lung cancer after smoking, as per the UK Health Security Agency (UKHSA).

In the UK, radon is a significant concern, particularly in areas with high radon potential, such as Devon, Cornwall, and parts of the Midlands. The Building Regulations 2010 (Approved Document C) mandates radon protection measures for new builds and major renovations in these areas. These measures include the installation of radon barriers, sumps, and ventilation systems to mitigate gas ingress.

Practical Example:
A homeowner in Cornwall renovates their property and discovers elevated radon levels during a survey. They install a radon sump system beneath the floor slab, connected to an external vent pipe, to safely disperse the gas. This intervention aligns with the UKHSA's guidance and ensures compliance with Building Regulations.

Related Terms:

1. **Radon Barrier:** A membrane installed in buildings to prevent radon gas from entering.
2. **Radon Sump:** A small void beneath a building designed to collect and vent radon gas.
3. **Ventilation System:** Mechanical or passive systems used to reduce radon concentrations indoors.
4. **Uranium Decay Chain:** The series of radioactive transformations that produce radon.
5. **Radon Potential Map:** A geographical map indicating areas with higher radon risks, published by the UKHSA.
6. **Air Quality Testing:** The process of measuring indoor air pollutants, including radon.
7. **Building Regulations Approved Document C:** The UK regulatory document addressing site preparation and resistance to contaminants, including radon.