

What is Reinforced Aerated Autoclaved Concrete (RAAC)?

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About Reinforced Aerated Autoclaved Concrete (RAAC):

- It is a **lightweight, bubbly form of concrete** that was **used in roofs, floors, and walls between the 1950s and 1990s**.
- It **looks like standard concrete**, but compared with the “traditional” reinforced material, which is typically denser, **Raac is weak and less durable**.
- The material was **favoured in construction projects because of its lightweight thermal properties**.
- **How is it made?**
 - It is made from a **combination of cement, lime, water, and an aeration agent**.
 - The **mixture is poured into moulds and then subjected to high pressure and heat, known as autoclaving, to create a lightweight, strong, and porous material**.
- **Advantages over Standard concrete:**
 - It is **cheaper**.
 - It is also **quicker to produce and easier to install**.

- **Insulation Properties:** RAAC has **excellent thermal insulation properties due to the air bubbles** within the material.
 - It **helps maintain a comfortable indoor temperature** while reducing heating and cooling energy consumption.
 - **Why is it a risk?**
 - The **concrete is aerated and “bubbly”, contains no “coarse aggregate”** and is **less dense** than traditional concrete, being around a third of the weight.
 - It **could easily absorb moisture, weakening the material and also corroding steel reinforcement within.**
 - This means **it is more prone to collapse over time.**
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Q1) What is Concrete?

Concrete is a versatile and widely used construction material composed of a mixture of cement, water, aggregates (such as sand, gravel, or crushed stone), and often various chemical additives or admixtures. It is a fundamental building material known for its strength, durability, and versatility. Concrete is used in a wide range of construction applications, including buildings, bridges, roads, dams, and more.

Source: [100 schools across England ordered to close buildings as they are constructed using unsafe concrete](#)

Source: <https://vajiramandravi.com/current-affairs/reinforced-aerated-autoclaved-concrete/>

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