

A photograph showing several cylindrical concrete test specimens on a white table. On the left, three light-colored specimens are arranged on a piece of brown paper. On the right, a stack of four darker, weathered specimens is also on brown paper. A blue diagonal line runs from the top right towards the bottom center of the image.

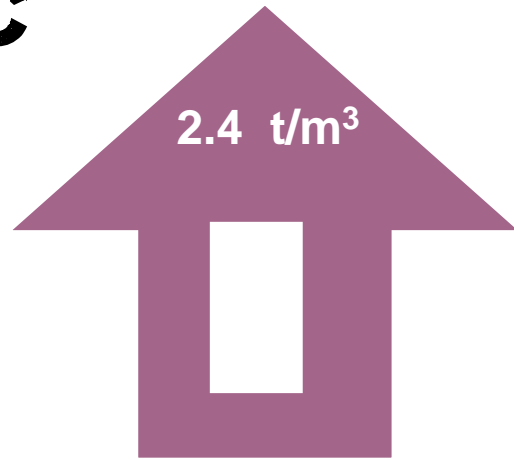
“Structural lightweight concrete”

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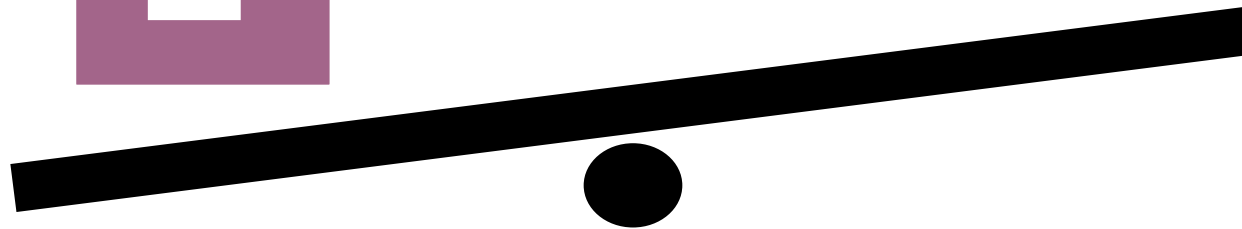
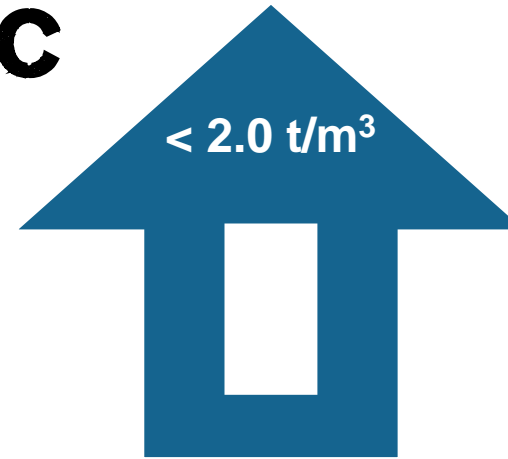
International Webinar on “Ready Mix Concrete Industry in Europe” | I.C.I | 18th May 2021



NC



LWC

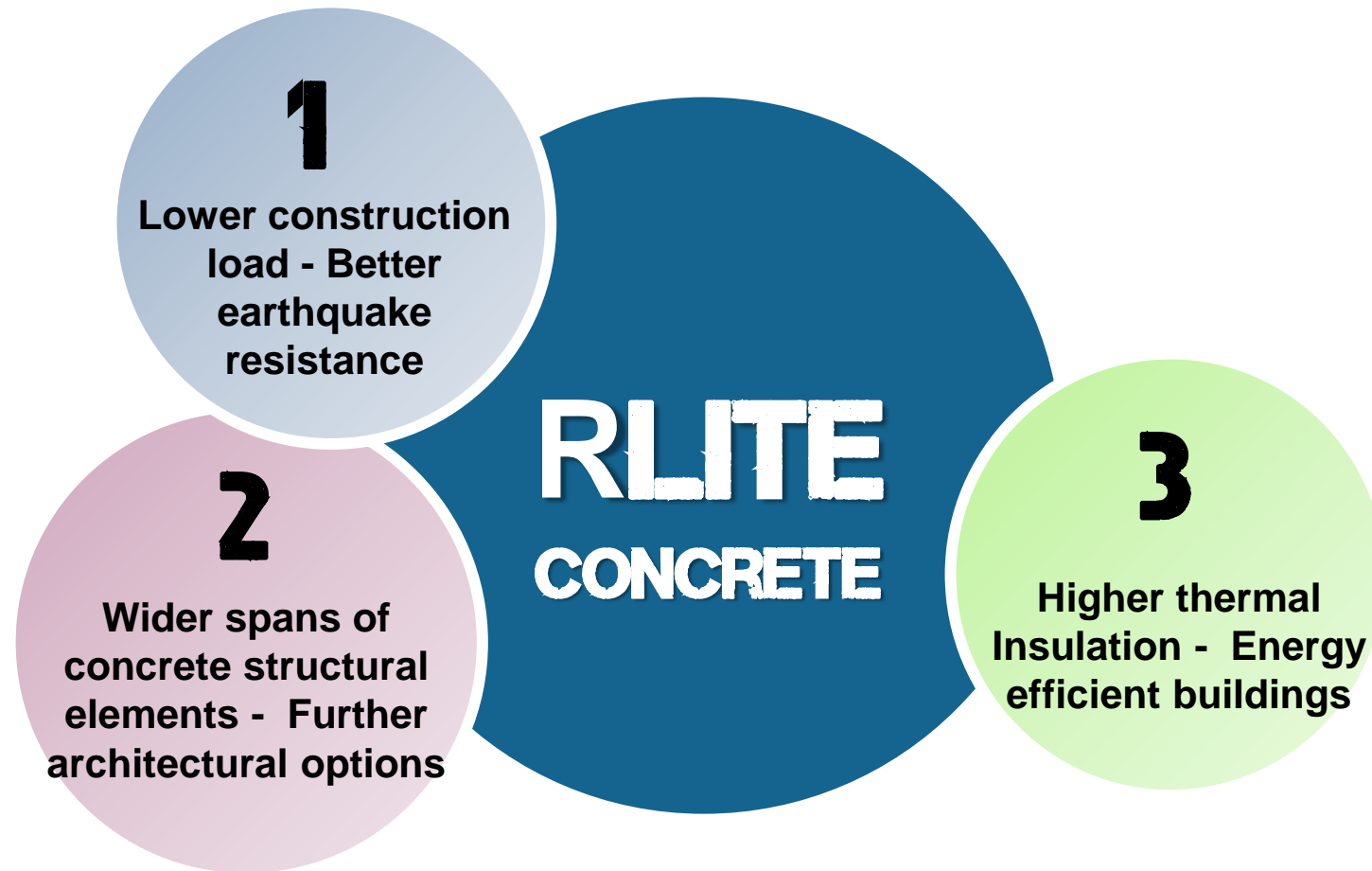


Lightweight Concrete vs Normal weight concrete

Structural Lightweight Concrete



R **LITE**
CONCRETE

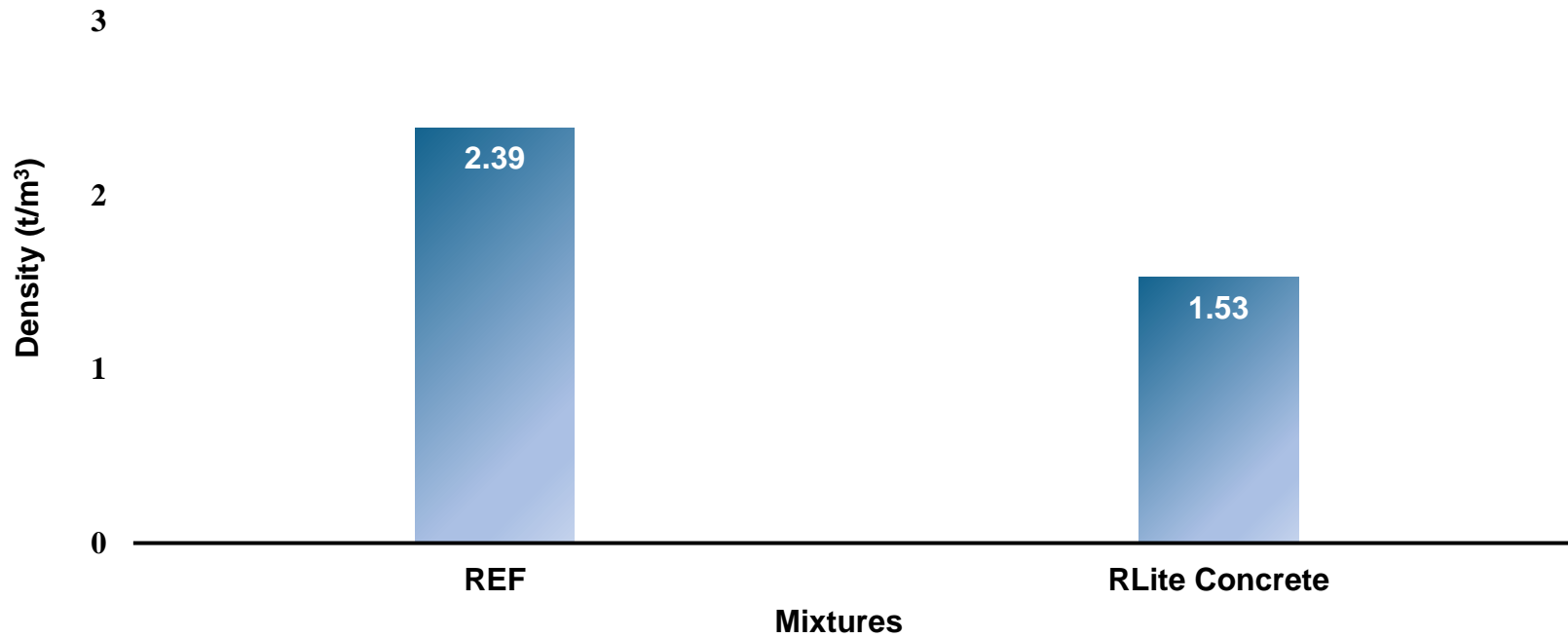


Why Rlite Concrete?

Structural Lightweight Concrete

Experimental results and discussion





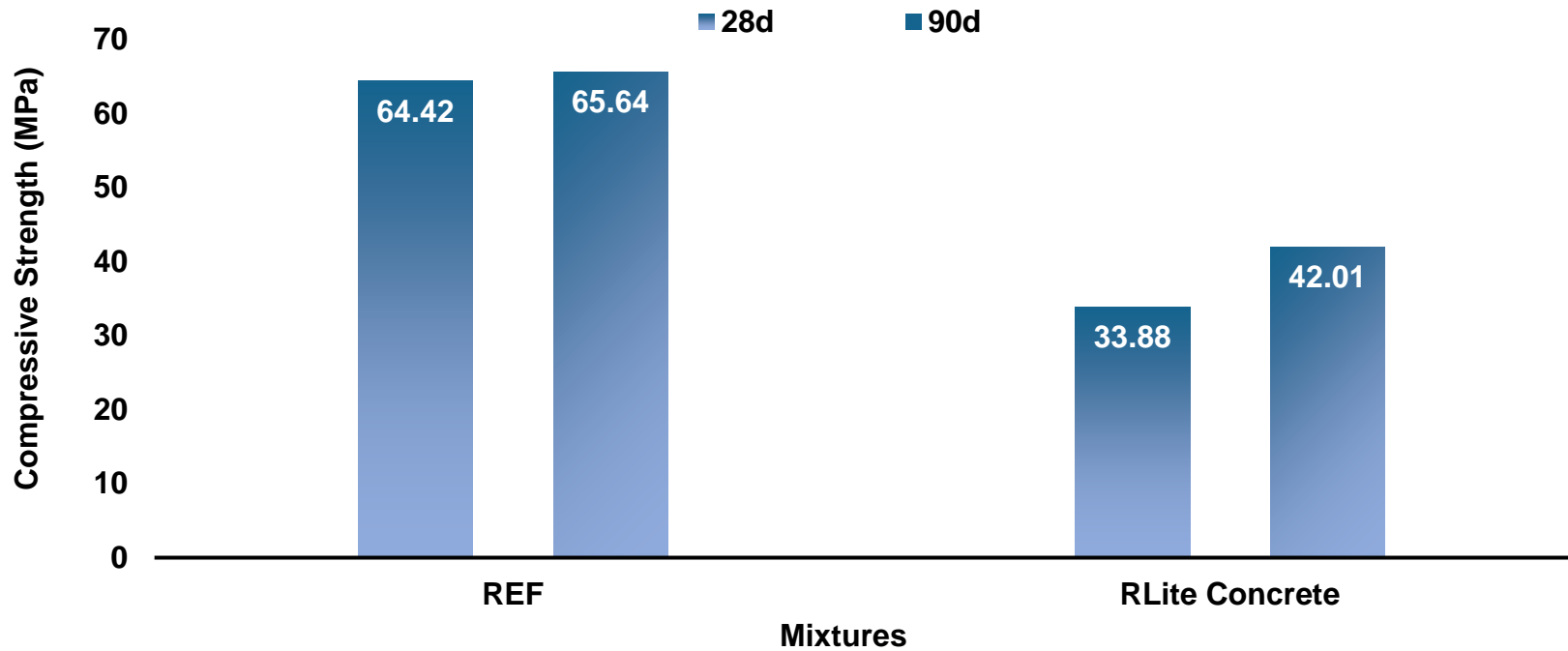
Fresh Concrete: Density (t/m³) – D1,8 to D1,6

Structural Lightweight Concrete



100x100 mm

Hardened Concrete: Compressive Strength



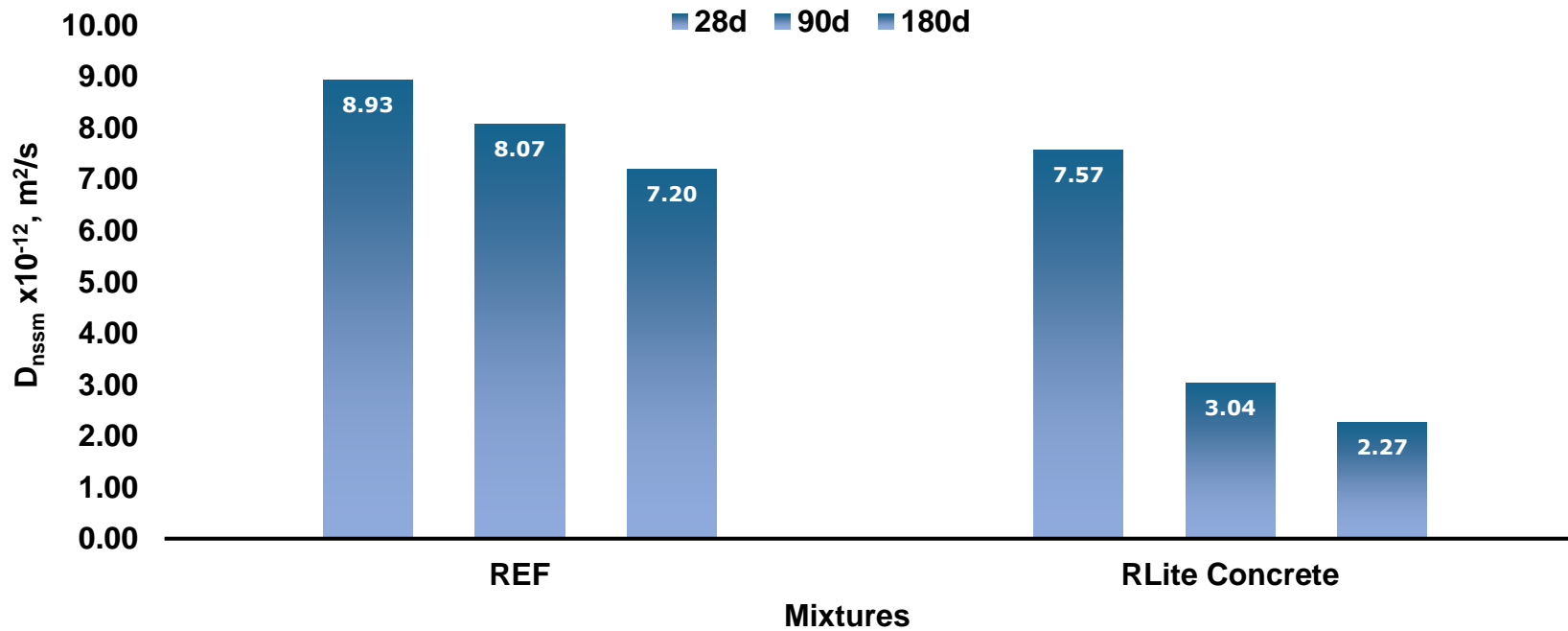
Hardened Concrete: Compressive Strength (MPa)

Structural Lightweight Concrete



NordTest Build 492

Durability Properties: Chloride migration coefficient



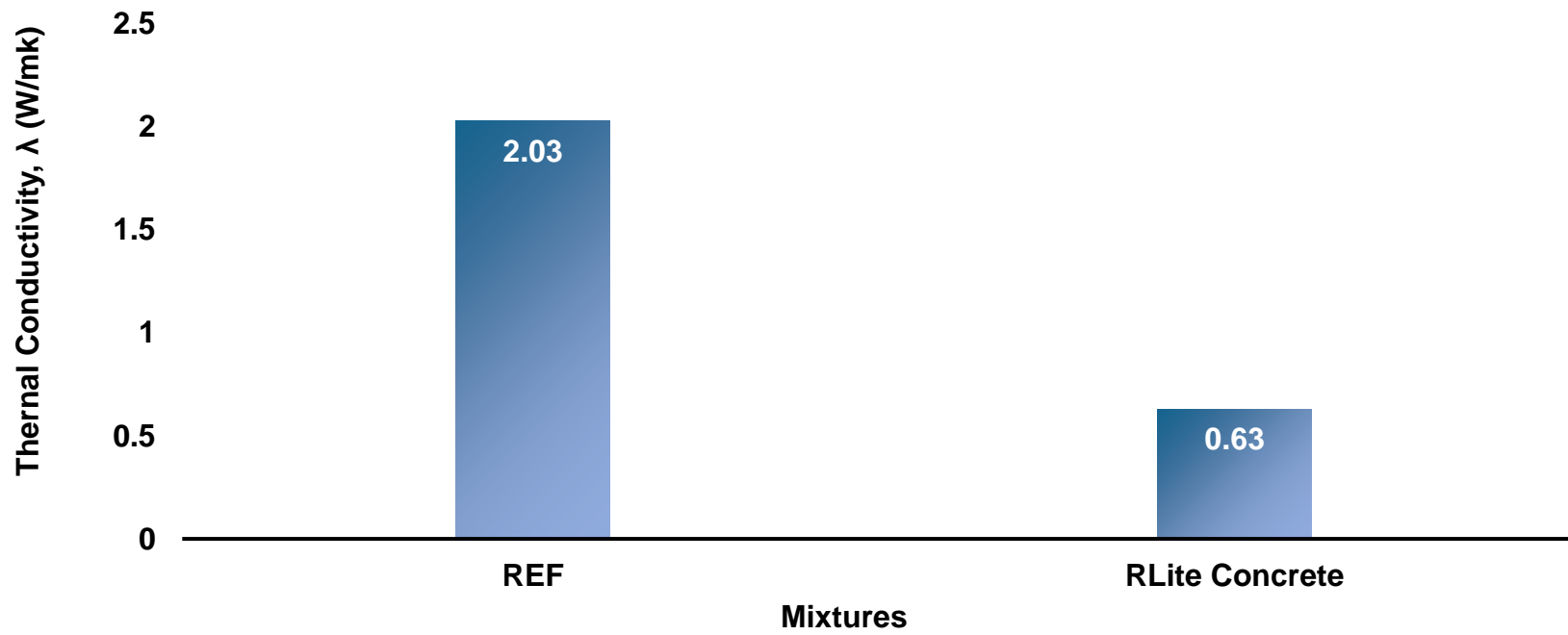
Chloride migration coefficient ($D_{nssm} \times 10^{-12} \text{ m}^2/\text{s}$)

Structural Lightweight Concrete



Chloride migration coefficient

Structural Lightweight Concrete



Thermal Conductivity (λ , W/mk)

Structural Lightweight Concrete



- Can be used in structural applications.
- Lower (69%) chloride migration coefficient compared to conventional concrete.
- Reduced thermal conductivity.
- Reduced construction cost without affecting quality!
- Reduced Carbon footprint

Conclusion



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Thank you