



CSH TECHNOLOGY IN FLOORING AND FOUNDATIONS

WHAT WE DO

Who are we?

Spanish company, founded in 2016.

Manufacturers of admixtures and mortars for construction.

All our products are using CSH Technology





CSH TECHNOLOGY FROM KRYSTALINE

THE NEXT GENERATION OF CRYSTALLINE WATERPROOFING!

What if we could make concrete floors and foundations stronger, denser, and more durable without changing the entire concrete mix/recipe?

Concrete flooring faces several common challenges

- Dusting
- Surface wear
- Cracking
- Moisture Penetration
- Long Curing times

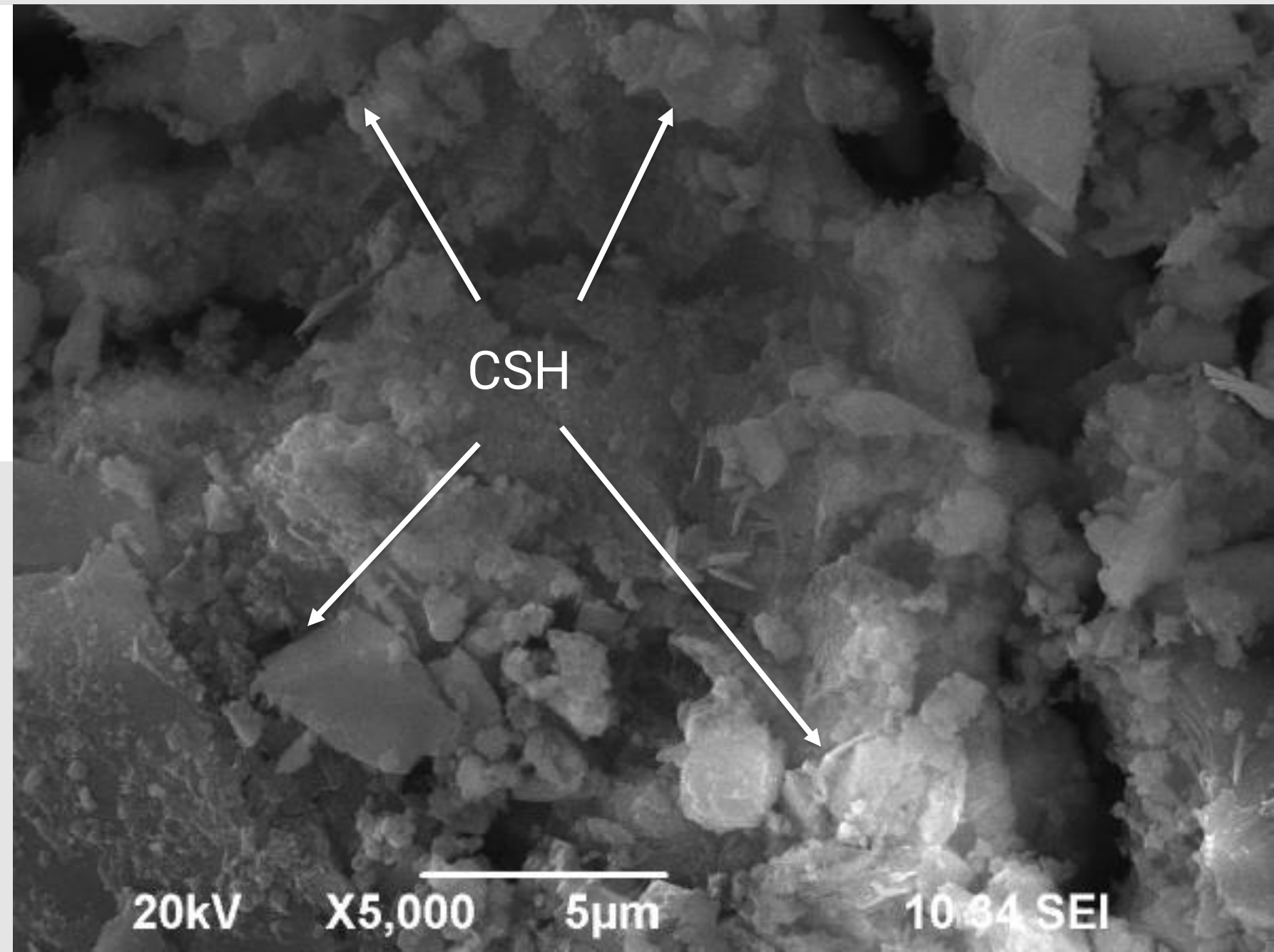
Modern admixtures with **CSH help solve these problems**

What is CSH?

CALCIUM SILICATE HYDRATE

It is the glue that makes concrete strong.

- It is created during the hydration process and continues in the long term if water is present.
- It is a non-soluble binder.
- It is considered a hybrid as its structure shares both crystalline and gel characteristics.



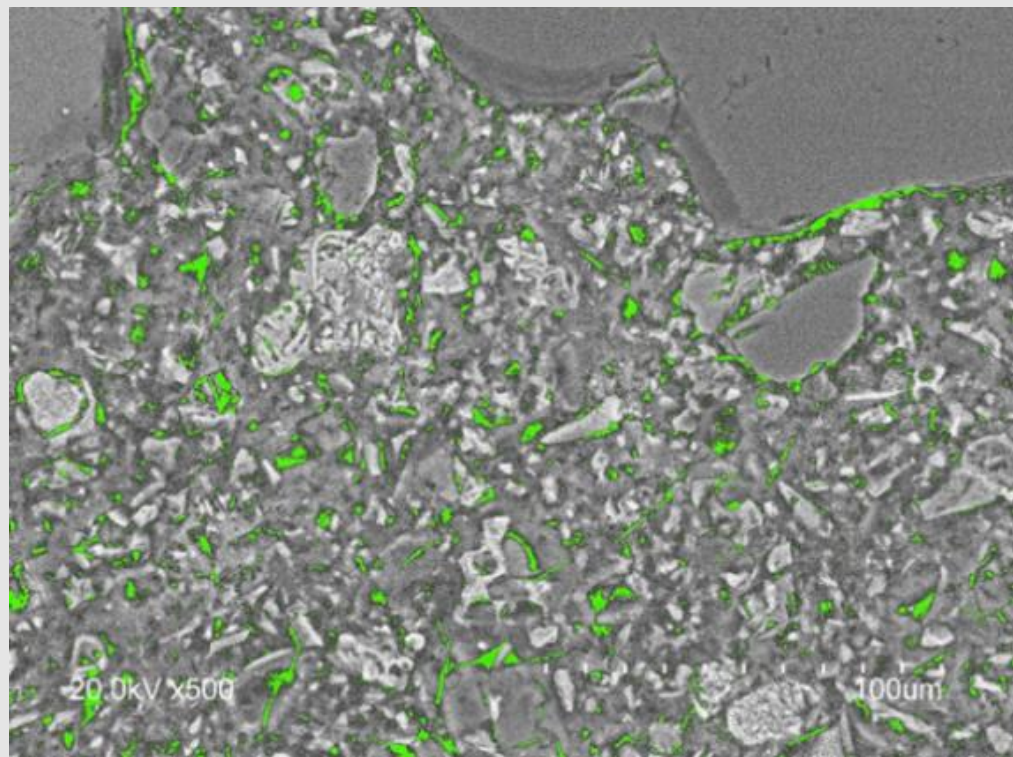
CSH Admixtures are performance-enhancing additives

They promote the formation of **additional** Calcium Silicate Hydrate gel

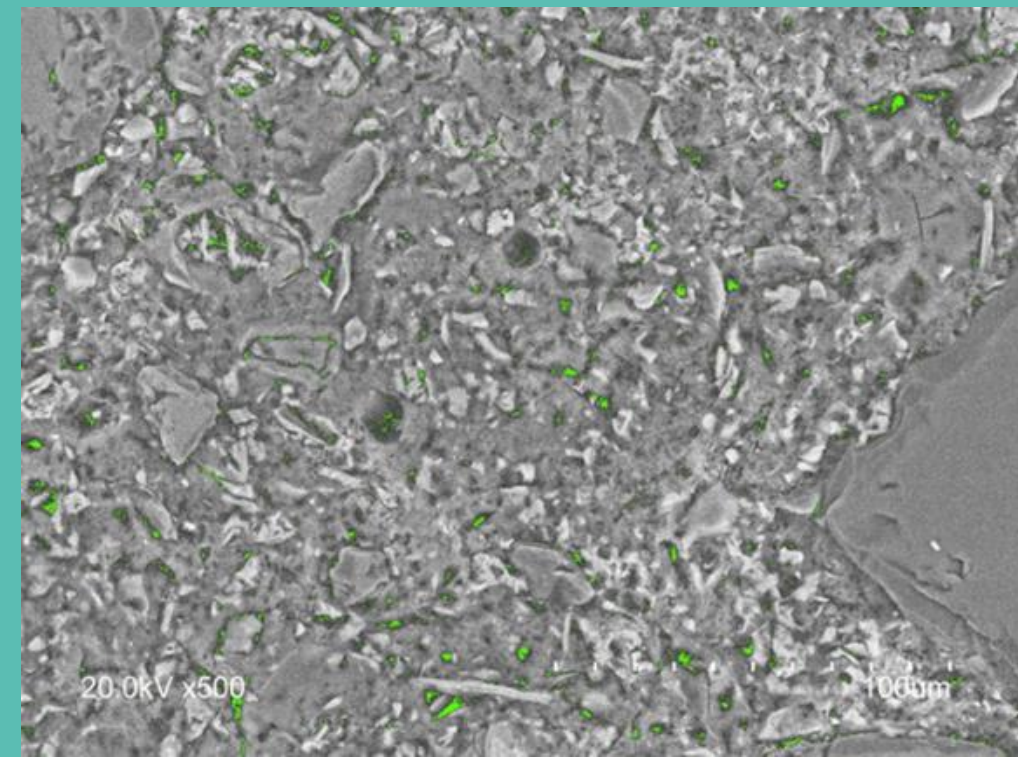
Key benefits

- Denser concrete structures
- Reduced porosity
- Improved strength development
- Waterproofing
- Self healing

COMPARISON BETWEEN: REFERENCE CONCRETE vs **KRYSTALINE CSH TECHNOLOGY CONCRETE**



REFERENCE



KRYSTALINE



ENHANCES CSH GELS AND CRYSTALS AND REDUCES CALCIUM HYDROXIDE

CSH



CALCIUM SILICATE HIDRATE

Ca(OH)₂



CALCIUM HYDROXIDE (PORTLANDITE)

Advantages of using CSH admixtures in floors and foundations

Faster Strength Development

- Earlier Compressive Strength
- Higher Compressive Strength

Improved Surface Durability

- Increased abrasion resistance
- Reduced dusting
- Stronger surface layer
- Better long-term wear resistance

Advantages of using CSH admixtures in floors and foundations

Reduced Permeability and Waterproofing

- Lower water penetration
- Reduced chloride ingress
- Better chemical resistance
- Lower risk of freeze-thaw damage

Advantages of using CSH admixtures in floors and foundations

Increased Self Healing Capabilities

- CSH Admixtures are permanently in the concrete and will activate when there is water present.
- CSH admixtures are hydrophilic, concrete will self-heal cracks up to 0,7mm

Advantages of using CSH admixtures in floors and foundations

Sustainability and Efficiency

- Longer service life
- Reduced repair and maintenance
- Potential reduction in cement usage – optimized mix designs
- Lower lifecycle costs

ADMIXTURE LINE

Krystaline Add1 – Self Healing



Krystaline Admixtures and Mortars



with C-S-H technology

2 PRODUCT LINES

Krystaline Admixtures



KRISTALINE ADD1



KRISTALINE ADD 1 CW



KRISTALINE ULTRA

Krystaline Add1

- State-of-the-Art Admixture based on Krystaline's CSH technology.
- Dosed at 1 Kg/m³ of concrete
- Its main function is to make concrete waterproof.
- Its secondary function is plasticizer, water reducer and setting retarder.
- Hydrophilic admixture, which improves the hydration of the cement paste.
- Generates an improvement in the internal structure of the concrete, resulting in a more durable, corrosion-free concrete that is more resistant to chemical attack.



Repair cracks and Reinforcing concrete

Concrete surface protection systems (EN 1504-2)



KRYSTALINE 1



KRYSTALINE DRY

Structural and non-structural repair systems (EN 1504-3)



KRYSTALINE BLOCK



KRYSTALINE BLOCK F



KRYSTALINE M60



KRYSTALINE PLUG

Applications



Irrigation and hydroelectric dams



Basements and underground parkings



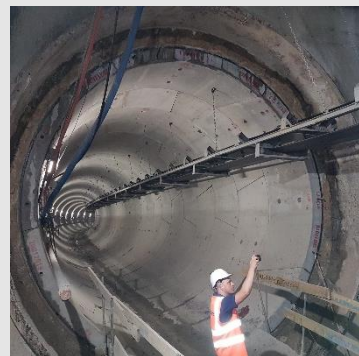
Bridges, decks and support structures



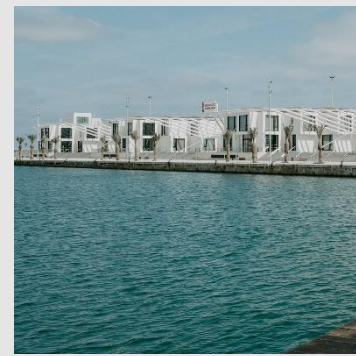
Swimming pools



Elevator pits



Tunnels



Marine structures and desalination plants



Water reservoirs, tanks and treatment plants

THANK YOU



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