

# Sulf8-Cem

## Sulf8-Cem

Unique sulphate resistant cement

Sulf8-Cem is formulated to provide an optimum solution for concrete civil works that are exposed to environments with sulphate presence.

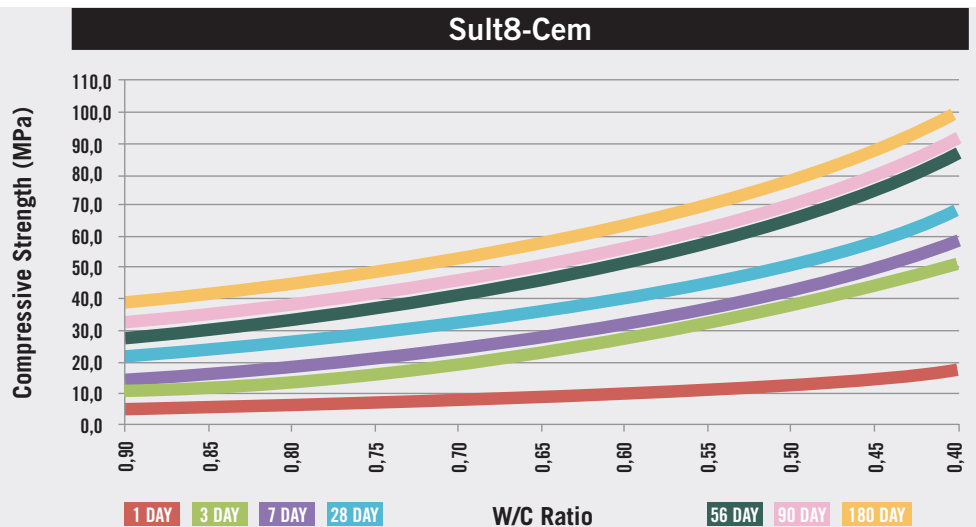


### Composition

- **Sulf8-Cem** is a CEM IV/B-V 42,5N LH SR Pozzolanic cement, formulated from Portland clinker and more than 36% selected quality siliceous fly ash, together with performance enhancing additives.
- Randfontein Grinding Station, **Sulf8-Cem** is classified as a Low Heat (LH), Sulphate Resistant (SR) cement as per the SANS 50197-1 (EN 197-1) specification in accordance with SANS 50196 (EN 196) test requirements.

### Strength performance

Customers who are unsure of the mix proportions to achieve the required concrete strength for a job, should contact their local Lafarge Cement sales consultant or our Call Centre on 011 657 1111.



**Disclaimer:** These performance curves are provided in good faith and are intended as a helpful guideline for users of our cement products. The data was generated under ideal controlled conditions using standard laboratory materials and a general PCE plasticizer. Testing under different conditions outside our control may not reproduce exactly the same results.



## Physical properties

| Property                          | Sulf8-Cem*  | SANS 50197-1 Spec. requirement |
|-----------------------------------|-------------|--------------------------------|
| Pozzolanic with siliceous fly ash | 38 %        | ≥ 36%                          |
| 2 day compressive strength        | 16,0 MPa    | ≥ 10,0 MPa                     |
| 28 day compressive strength       | 46,0 MPa    | ≥ 42,5 MPa                     |
| Initial set                       | 280 minutes | ≥ 75 minutes                   |
| Soundness                         | 1,0 mm      | ≤ 10 mm                        |

\*Typical test results

## Applications

**Sulf8-Cem** counteracts the reaction of sulphate attack on concrete. It has been developed as a solution for concrete civil works in aggressive environments such as sewerage plants, feedlots, abattoirs, areas exposed to mining activity and coastal areas where soil conditions are high in sulphate. As a general guideline, if ground concentrations of sulphate are above 1000 ppm, a sulphate-resisting cement should be used in concrete structures.

The Low Heat characteristics of **Sulf8-Cem** further enhance the durability of concrete, especially in mass pours, by reducing the potential for thermal cracking, which both reduces structural strength and allows ingress of reactive corrosion agents.

## Concrete mix characteristics

### Freshly mixed concrete features:

- Lower Heat of Hydration\* – also peak temperatures in mass concrete pours are lower and occur at a later age
- Better workability for easier handling, placing and finishing
- More stable mixes that keep coarse aggregates uniformly dispersed
- Improved water retention and less bleeding for better surface finish
- Better productivity – concrete is easier to place with less effort

\*A typical value for Heat of Hydration, determined in accordance with SANS 50196-9 (EN 196-9) is an exceptionally good 166 J/g at 41 h (versus the specification criterion of < 270 J/g), classifying Sulf8-Cem as a low-heat common cement.

### Concrete in the hardened state has:

- Higher long-term strength and durability
- Better resistance to all forms of chemical attack
- Denser concrete with good impermeability
- Better finishes for floor slabs and off-shutter work

## Technical services

**Sulf8-Cem** is fully supported by Lafarge Integrated Solutions and Innovation Centre (previously known as QDSA), which is a SANAS accredited Civil Engineering testing facility. Complying with ISO/IEC 17025, the Centre has a proud continued Accreditation since 1996.

## Chemical properties

| Property                                 | Sulf8-Cem* | SANS 50197-1 Spec. requirement |
|--|------------|--------------------------------|
| C <sub>3</sub> A (tri-calcium aluminate) | 8 %        | ≤ 9% m/m                       |
| SO <sub>3</sub>                          | 1,60%      | ≤ 3,5% m/m                     |
| Cl                                       | 0,03%      | ≤ 0,10% m/m                    |

## Quality

**Sulf8-Cem** complies with the chemical and physical requirements of SANS 50197-1 (EN 197-1) for a CEM IV/B-V 42,5N LH SR cement.

## Safety: our no 1 priority

Make safety the first step in your planning for any job. Before an order is executed, we will conduct a site inspection to ensure the delivery and offloading can be carried out safely. Safety Data sheets are available from:

- Lafarge Call Centre on: 011 657 1111
- Lafarge website: [www.lafarge.co.za](http://www.lafarge.co.za)

## For ease of ordering

**Sulf8-Cem** is supplied in bulk or 50 kg according to the needs of our contractor and concrete product manufacturing customers. Please contact:

- Your local Lafarge Sales Representative
- Call Centre: 011 657 1111

## Contact us

- For general information on **Sulf8-Cem** and other Lafarge cement products please contact:  
Lafarge South Africa, Head Office on: 011 657 0000
- For further technical information please contact:  
Lafarge Integrated Solutions and Innovation Centre on:  
011 226 3600

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