

# DFRC first-aid repair material Technical property(typical value)

# Product types:

Cement

Repairing mortar

Repairing concrete

DFRL has independently developed the DFRC series of rapid repair cement, repair mortars, and concrete materials, characterized by rapid hardening, high early strength, and unique micro-expansion properties that provide a strong bond to the base layer and resist cracking. These products have been successfully applied in emergency repairs and quick rehabilitation projects for airport runways, aprons, highways, bridge surfaces, parking lots, repair shops, industrial production site floors, and cold storage warehouse floors.

| Cement                 |                  |           |       |                 |  |
|------------------------|------------------|-----------|-------|-----------------|--|
| Chemical Composition % | SiO <sub>2</sub> | $Al_2O_3$ | CaO   | SO <sub>3</sub> |  |
|                        | 11.14            | 25.76     | 42.67 | 11.87           |  |
| Initial Setting Time   | 17 min           |           |       |                 |  |
| Final Setting Time     | 26 min           |           |       |                 |  |

| Repairing mortar           |          |        |          |       |
|----------------------------|----------|--------|----------|-------|
| Mortar strength Mpa        | 1.5h     | 3h     | 24h      | 28d   |
| Flexural/Compressive (MPa) | 4.8/27.1 | 6.5/38 | 9.0/50.1 | 10/61 |

| Repairing concrete         |      |      |      |      |      |
|----------------------------|------|------|------|------|------|
| Time                       | 2h   | 6h   | 1d   | 7d   | 28d  |
| Flexural/Compressive (MPa) | 20.7 | 27.8 | 28.8 | 35.6 | 39.3 |

The cement production process at Dengfeng Smelting Materials is designed to achieve maximum consistency. Through precise and stringent control, we can accurately ensure the refractory quality and performance of the cement. This approach significantly reduces response times and enhances production flexibility, allowing us to deliver superior service.

## Cement Testing and Quality Control

Dengfeng Smelting Materials' aluminate cement is engineered to actively meet customer requirements. Key qualities of high-performance cement include setting consistency, flowability, strength, particle size distribution, and precise chemical composition. Our quality control system is meticulously designed to ensure consistent product quality, enhancing the reliability and performance of customers' applications.

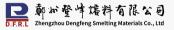
Our cement undergoes rigorous testing to meet standards, including flowability, setting time, and strength assessments based on the Chinese GB201/T2015 standard with standardized sand. Tests include specific surface area, initial and final setting times, flexural and compressive strength. Chemical composition is verified through X-ray fluorescence spectroscopy (XRF).

#### **Packaging Options**

- Bulk bags
- Small bags

#### Shelf Life and Storage

To ensure longevity, all Dengfeng Smelting aluminate cements should be stored in original, sealed packaging under dry conditions. Experience shows that even after prolonged storage, performance remains unaffected if the product is kept in optimal conditions. However, direct sunlight may degrade plastic packaging over time, necessitating additional protection to avoid UV exposure. Shrink-wrap should remain intact until use, as removing it may reduce the cement's shelf life.



This brochure provides general guidance on the basic properties and characteristics of various Dengfeng Smelting Materials products (hereinafter referred to as "Product Information") for potential customers. Dengfeng Smelting Materials makes no guarantee or warranty as to the accuracy or completeness of the Product Information in this brochure.

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- Dengfeng Smelting Materials reserves the right to modify Product Information at its sole discretion from time to time without prior notice.
- Our company is committed to bearing legal responsibility for any personal injury or property damage resulting from product defects. Users should carefully review the product instructions and safety guidelines prior to use.

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