

## Ultra-Low Cement Castable For High-Performance Refractory Applications

### Our Product Introduction

#### Basic Information

- Place of Origin: Zhengzhou, China
- Brand Name: Rongsheng Xinwei
- Certification: ISO9001
- Model Number: Rongsheng
- Minimum Order Quantity: 1 Ton
- Price: 200-800 USD
- Packaging Details: Packed on wooden pallets, with water-proof cover, and tightened with plastic/steel bandages
- Delivery Time: 10-20 Days
- Payment Terms: TT; L/C
- Supply Ability: 2000 tons/month



#### Product Specification

- Highlight: High Performance Refractory Castable,  
Ultra-Low Cement Castable,  
High Performance Refractory Applications  
Castable

## Product Description

### Product Description of Ultra-Low Cement Castable For High-Performance Refractory Applications:

Ultra-Low Cement Castable (ULCC) is a highly advanced refractory material that is specially designed to provide exceptional performance in high-temperature industrial environments. It contains a significantly reduced amount of cement, typically less than 3% by weight, compared to traditional castables. The reduction in cement content leads to several beneficial properties, including improved mechanical strength, enhanced thermal shock resistance, and lower porosity. These characteristics make ULCC an ideal choice for applications where high performance and durability are critical.



### Composition of Ultra-Low Cement Castable For High-Performance Refractory Applications:

**Refractory Aggregates:** High-purity materials such as alumina, silicon carbide, and mullite, chosen for their excellent thermal properties and resistance to wear.

**Binders:** Minimal amount of high-alumina cement (less than 3%), combined with fine particles (micro-silica) to create a dense and cohesive matrix.

**Additives:** Dispersants and other chemical additives to improve workability and reduce water demand during mixing and application.

### Features of Ultra-Low Cement Castable Refractory

**Enhanced Mechanical Strength:** The low cement content results in a dense, strong material with high load-bearing capacity, even at elevated temperatures.

**Superior Thermal Shock Resistance:** The reduced cement content and optimized particle packing minimize the formation of cracks during rapid temperature changes, ensuring structural integrity.

**Low Porosity:** The dense structure of ULCC reduces porosity, enhancing its resistance to slag penetration and chemical corrosion.

**High Thermal Conductivity:** The optimized composition promotes efficient heat transfer, making it suitable for applications requiring effective thermal management.

**Reduced Shrinkage:** Lower water content during mixing and curing leads to minimal shrinkage, reducing the risk of deformation and cracking.

### Applications of Ultra-Low Cement Castable Refractory:

**Iron and Steel Industry:** ULCC is widely used in ladles, tundishes, and blast furnace linings where high-temperature stability and resistance to slag attack are essential.

**Cement Industry:** Ideal for kiln linings, particularly in the transition and burning zones, where resistance to thermal shock and abrasion is crucial.

**Petrochemical Industry:** Suitable for use in reactors, reformers, and other high-temperature processing units exposed to aggressive chemical environments.

**Non-Ferrous Metallurgy:** Effective in the linings of furnaces and smelters, where it provides excellent resistance to molten metal corrosion and thermal cycling.

**Power Generation:** Used in boilers, incinerators, and other high-temperature equipment to ensure reliable and long-lasting performance.

### Advantages of Choosing Ultra-Low Cement Castable:

**Longevity:** The dense structure and superior resistance to wear and corrosion significantly extend the service life of refractory linings.

**Cost Efficiency:** Reduced maintenance and downtime due to the material's durability and resistance to thermal cycling result in lower overall operating costs.

**Customization:** ULCC formulations can be tailored to meet specific application requirements, ensuring optimal performance in various industrial settings.

**Ease of Installation:** Despite its high performance, ULCC is designed for easy mixing, placement, and curing, making it suitable for both new installations and repairs.

### Why Choose Rongsheng Refractory?

Rongsheng Refractory has over 20 years of experience in manufacturing and supplying top-quality refractory materials. Our Ultra-Low Cement Castable is crafted using state-of-the-art technology and high-purity raw materials to deliver unparalleled

performance in the most demanding industrial environments. Trusted by clients in more than 100 countries and regions, Rongsheng's ULCC ensures reliable, efficient, and long-lasting solutions for your high-temperature applications. Our commitment to quality, innovation, and customer satisfaction makes us the preferred choice for industries worldwide.

For more information or to request a quote, please contact us at Tel/Whatsapp: +86-18538509097, Email: Jackyhan2023@outlook.com.



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