



## FUSED MULLITE |

### INTRODUCTION

Fused Mullite is produced by fusing a mixture of high-purity Bayer Alumina and pure Quartz in a tilting-type arc furnace at a temperature around 2250°C. The molten mass is then cooled under controlled conditions, ensuring a high degree of mullitization characterized by well-defined columnar crystals.

Fused Mullite is a key raw material used in the refractory industry, particularly for applications requiring thermal shock resistance and corrosion resistance.

The YUFA Group also manufactures micro sodium mullite, which has a sodium oxide content of less than 0.1%. The primary crystal phase in micro sodium mullite is mullite. Thanks to the reduced sodium oxide content, micro sodium mullite exhibits significantly improved refractoriness, volume density, flexural strength, compressive strength, true density, and hardness compared to common mullite.

### APPLICATION - REFRACTORY MATERIALS

- Low creep hot blast furnace bricks, Sillimanite bricks, Hot metal torpedo tank lining bricks
- High-temperature industrial kiln bricks, Glass kiln lining bricks, Shed boards
- Petrochemical industry applications
- Investment casting, producing refractory materials for the steel industry, producing high-purity mullite for glass melting furnace blocks, kiln furniture, and other applications
- Refractories for the glass and steel industries
- High-purity mullite blocks used for hot blast stoves in the steel industry
- Ceramic kilns for the petrochemical industry
- Glass lining bricks for kilns
- Glass contact refractories
- Sagger and shell building materials
- Cast housing construction and high-grade ceramics...



## FUSED MULLITE

### CHEMICAL COMPOSITION

Chemical Composition of Common Fused Mullite		
Chemical Composition	Grit > 0.1mm	Fine Powder ≤ 0.1mm
Al <sub>2</sub> O <sub>3</sub> %	74-80	70-77
SiO <sub>2</sub> %	20-25	22-29
Fe <sub>2</sub> O <sub>3</sub> %≤	0.2	0.3
CaO %≤	0.3	0.3
K <sub>2</sub> O+Na <sub>2</sub> O %≤	0.25	0.3

Chemical Composition Of Micro Sodium Fused Mullite					
Chemical Composition	Al <sub>2</sub> O <sub>3</sub> % ≥	SiO <sub>2</sub> % ≤	Na <sub>2</sub> O % ≤	Fe <sub>2</sub> O <sub>3</sub> % ≤	LOI %
Micro Sodium Mullite	70-80	20-30	0.1	0.1	0.1