



CUMI

**REFRACTORY SOLUTIONS
FOR GLASS INDUSTRY**



CARBORUNDUM UNIVERSAL LIMITED
SUPER REFRACTORIES



CUMI is a flagship company of the Murugappa Group, one of India's leading business conglomerate. The Murugappa Group with 29 major companies is engaged in diverse areas of business such as Engineering, Abrasives, Finance, General Insurance, Cycles, Sugar, Farm Inputs, Fertilizers, Plantations, Bio-products, Nutraceuticals, IT and Construction.

Carborundum Universal Limited or CUMI is a pioneer and market leader in Abrasives and Super Refractories in India. Besides being a leading manufacturer of refractory, industrial and ceramic products in India, CUMI is amongst the largest producers of Silicon Carbide and Zirconia in the world.



CUMI's Refractory plant in India

Super Refractories

CUMI's refractory division was started in 1965, pioneering the manufacture of Silicon Carbide, Mullite, High Alumina, Insulation bricks and low cement castables in India. Today, the company's state-of-the-art plants in India and overseas manufacture a wide range of fired, monolithics and precast products for ceramics, glass, carbon black, ferrous and non ferrous industries., with exports to major countries across the globe.

Product innovation and value engineering define the division's customer centric focus and Total Solutions work culture. Besides the capability to manufacture customized complex shapes for critical applications, CUMI's Super Refractories division also offers technical expertise and application engineering support that is customised to suit the varied needs of different user industries.



First refractory manufacturer in India, with kilns of firing temperatures upto 1800°C

Refractories for Regenerator

CUMI has been pioneering the use of high purity refractories based on Fused Mullite for regenerators for more than forty years. Today CUMI offers a wide range of Mullite / Andalusite based refractories which exhibits high volume stability, high thermal shock resistance, low thermal expansion and high refractoriness.

In addition to above characteristics, Fused Mullite based CUMILITE WHF refractory, demonstrates excellent creep resistance and alkali resistance, which is an important factor for attaining longer campaign life in excess of 10 years.

Port neck arches in CUMILITE WHF have given life of more than two campaigns (> 16 years) in container glass furnace and hence can be considered as a cost effective substitute for AZS Fusion Cast Refractories for this area

Application for Regenerator

	CUMILAG 23	CUMILAG 25 / 26	CUMILITE W	CUMILITE WHF	CUMILITE 60A	CUMILITE 60A SPL	CUMILITE 65A	CUMILITE 65A SPL	CUMIZITE ZM2 HF SPL	CUMIZITE ZM HF	CUMILOX 101HF
CROWN											
CHIMNEY BLOCKS - TOP COURSES > 250TPD FURNACE											
SIDE WALLS - TOP COURSES											
SIDE WALLS - MIDDLE COURSES											
TARGET WALLS - TOP COURSES											
TARGET WALLS - MIDDLE COURSES											
PARTITION / DIVISION WALLS - TOP COURSES											
PARTITION / DIVISION WALLS - MIDDLE COURSES											
RIDER ARCH & SPANNER TILES											
WALL BACK UP											
CHECKERS FOR TOP LAYERS IN BOROSILICATE FURNACE											
PORT NECK / CONNECTION											



Refractories for Melter

CUMI recommends CUMIZON range of products for sub-paving and melter superstructure. CUMIZON refractories being made with high purity zircon minerals exhibit high refractoriness, chemical stability, load bearing capacity and corrosion resistance against molten glass.

CUMI recommends CUMIZITE range of products made out of high purity fused grains for areas that encounter alkaline vapour attack and thermal shock.

For furnaces having temperature exceeding 1650° C in the melter crown, fused mullite based refractory CUMILITE WHF is recommended for its low creep and chemical stability.

Application Guideline for Melter

	CUMIZON	CUMIZON 65G	CUMILITE WHF	CUMILITE 60A	CUMILITE 60A SPL	CUMIZITE ZM2 HF SPL	CUMIZITE ZM HF	CUMIRAM RM ZM 6	CUMIHICAST CZM 31	CUMIBOND LZ 85
BUFFER LAYER IN SUPERSTRUCTURE	■									
SUB PAVING	■			■						
MONOLITHIC LAYER IN SUB PAVING								■		
PORT BURNER BLOCKS						■	■			
DOG HOUSE BACK-UP ARCH						■	■			
CROWN (> 1650° C)			■							
CROWN MAINTENANCE (ZIRCON PATCH)										■



Subpaving in Andalusite Blocks



Zircon Buffer Layer



Zircon Mullite Dog House Backup Arch



Mullite Blocks for Day Tank

Refractories for Distributor & Forehearth

For Distributor and Forehearth covers, CUMI recommends CUMILITE range of refractories due to good resistance against alkali vapour, very good thermal shock resistance and low creep. Manufacturing large and complex shapes are CUMI's unique strength.

For borosilicate furnaces, CUMIZITE range of refractories are recommended to withstand higher corrosion.

CUMI manufactures and supplies complete range of feeder expendables with technical know-how from DFC Thermal Ceramics, UK.

Application Guideline for Distributor & Forehearth

	CUMILITE WHF	CUMILITE 60A	CUMILITE 65A	CUMIZITE ZM2 HF SPL	CUMIZITE ZM HF
DISTRIBUTOR COVERS FOR SODA-LIME					
DISTRIBUTOR COVERS FOR BOROSILICATE					
FOREHEARTH COVER FOR SODA-LIME					
FOREHEARTH COVER FOR BOROSILICATE					
FOREHEARTH BURNER BLOCKS FOR SODA-LIME					
FOREHEARTH BURNER BLOCKS FOR BOROSILICATE					
SPOUT BURNER / COVER FOR SODA-LIME					
SPOUT BURNER / COVER FOR BOROSILICATE					



Forehearth Cover Blocks



Forehearth Super Structure



Feeder Expendables



CUMI's Worldwide Network At Your Service

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