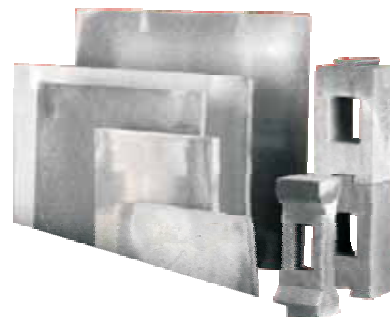


Nitride Bonded Silicon Carbide Refractories



CUMIREX



USER INDUSTRIES	APPLICATION
• Ceramics	Kiln furniture
• Aluminium	Aluminium reduction cell lining, Tap-out blocks
• Copper	Shaft Furnace lining, Launder
• Iron & Steel	Blast furnace lining

PROPERTIES	UNIT	CUMIREX		CUMIREX SUPER	
		Limit Value	Typical Value	Limit Value	Typical Value
Maximum Hot Face Temperature	°C	1550	1550	1550	1550
Bulk Density	gm/cc	2.62 min.	2.67	2.63 min.	2.69
Apparent Porosity	%	16.0 max.	15.0	16.0 max.	15.0
Cold Crushing Strength	Kg/cm ²	1400 min.	1650	1400 min.	1600
Modulus of Rupture					
At Room Temperature	Kg/cm ²	300 min.	350	300 min.	325
At 1350°C		450 min.	550	450 min.	500
Thermal Conductivity At 900°C Hot Face Temperature	W/m ² K	15.0 min.	15.3	-	15.0
Chemical Analysis					
SiC	%	75.0 min.	77.0	80.0 min.	81.0
Si ₃ N ₄		20.0 min.	21.0	17.0 min.(Si ₃ N ₄ + Si ₂ ON ₂)	18.0(Si ₃ N ₄ + Si ₂ ON ₂)
Others		1.0 max.	0.5	-	-
Fe ₂ O ₃		0.5 max.	0.3	0.5 max.	0.3
Recommended Laying Mortars		CUMIBOND LS 4*			

* In Aluminium Reduction Cell, CUMIBOND LS 7P - between Bricks and CUMIBOND LS 7S - between Brick and Steel Plate

Note : The above typical values shown are based on average test result on standard samples. Properties are subjected to reasonable variation based on product shape etc. and hence should be considered for general guidance only.

CUMIREX and CUMISTAR Nitride-bonded Silicon Carbide refractories have high thermal conductivity, superior thermal shock and oxidation resistance. They also have higher hot strength compared to oxide bonded Silicon Carbide refractories. This makes them an ideal choice as kiln furniture. Their non-wetting property makes them suitable for use in non-ferrous metal contact areas.

CUMIREX : Silicon Nitride Bonded SiC , Pressed Product
CUMIREX SUPER : Silicon Nitride (+ Oxy Nitride) Bonded SiC , Pressed Product

Feasibility of special shapes require case-by-case study by CUMI manufacturing and Technical team. We would request all our customers to kindly ask CUMI Sales Representatives for detail Product Data, Quality Assurance Plans etc. as and when applicable.



CARBORUNDUM UNIVERSAL LIMITED
SUPER REFRACTORIES



Plot No. 102 & 103, Sipcot Industrial Complex,
Phase II, Ranipet 632 403, TN, India.
Phone : +91 4172 244582, 244197
Fax: +91 4172 244982.

Plot No. 35, 37, 48-51, Adhartal Industrial Estate,
PO Jabalpur - 482004, Madhya Pradesh
Phone: +91 761 2680759 / 2680725,
Fax: +91 761 2680678

Mungileri Village, Vinnampalli Post,
Katpadi Taluk, Vellore District - 632516
Phone: +91 4172 646030
Fax: +91 4172 255396

**Marketing Office : 105, Sreela Terrace, III Floor, Western Side, Gandhi Nagar Ist Main Road,
Adyar, Chennai – 600 020, Phone: +91 44 42187812/ 13 / 14 / 15
E-mail : cumiref@cumi.murugappa.com
www.cumi-murugappa.com/refractories/**

Nitride Bonded Silicon Carbide Refractories



CAST CUMIREX & CUMISTAR

USER INDUSTRIES	APPLICATION
<ul style="list-style-type: none"> • Power • Ceramics • Aluminium • Copper 	Wear Resistant Parts, Burner tiles Kiln furniture, Burner tube Tap-out blocks Thermocouple sheath



PROPERTIES	UNIT	CAST CUMIREX		CUMISTAR		CUMIREX CT	
		Limit Value	Typical Value	Limit Value	Typical Value	Limit Value	Typical Value
Maximum Hot Face Temperature	°C	1550	1550	1550	1550	1550	1550
Bulk Density	gm/cc	2.62 min.	2.65	2.70 min.	2.75	2.60 min.	2.62
Apparent Porosity	%	18.0 max.	17.0	11.0 max.	9.0	18.0 max.	15.0
Cold Crushing Strength	Kg/cm ²	1400 min.	1500		-		-
Modulus of Rupture							
At Room Temperature	Kg/cm ²	300 min.	320	1500 min.	1550	-	400
At 1350°C		400 min.	440	1500 min.	1600	-	1000
Thermal Conductivity At 900°C Hot Face Temperature	W/m ² K	15.0 min.	15.3	-	-	-	-
Chemical Analysis							
SiC	%	75.0 min.	77.0	75.0 min.	75.6	75.0 min.	75.2
Si ₃ N ₄		18.0 min.	20.0	20.0 min.	21.0	20.0 min.	20.5
Others		-	3.0	1.0 max.	0.90	1.0 max.	0.90
Fe ₂ O ₃		-	0.5	0.2 max.	0.18	0.20 max.	0.18
Recommended Laying Mortars							

Note : The above typical values shown are based on average test result on standard samples. Properties are subjected to reasonable variation based on product shape etc. and hence should be considered for general guidance only.

CUMIREX and CUMISTAR Nitride-bonded Silicon Carbide refractories have high thermal conductivity, superior thermal shock and oxidation resistance. They also have higher hot strength compared to oxide bonded Silicon Carbide refractories. This makes them an ideal choice as kiln furniture. Their non-wetting property makes them suitable for use in non-ferrous metal contact areas.

CAST CUMIREX : Silicon Nitride Bonded SiC, Vibro-cast Product
 CUMISTAR : Silicon Nitride Bonded SiC, Slip-cast Premium Product
 CUMISTAR CT : Silicon Nitride Bonded SiC, Slip-cast Product

Feasibility of special shapes require case-by-case study by CUMI manufacturing and Technical team. We would request all our customers to kindly ask CUMI Sales Representatives for detail Product Data, Quality Assurance Plans etc. as and when applicable.



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 E-mail : cumiref@cumi.murugappa.com
 www.cumi-murugappa.com/refractories/