

High Density High Strength Calcium Silicate Board & Shapes



INTRODUCTION

Firebird high density high strength calcium silicate board is made from selected high purity raw material with glass fiber or carbon fiber reinforced. The temperature limit is 1000°C. With fiber reinforced, the material is suitable to be used in high tensile and torsion force application.

The material is not wetted by liquid non-ferrous metal, which is an ideal material in casting application with direct contact with liquid metal.

The board can be precision machined into tiny tolerance shapes by our CNC machine.

CHARACTERISTICS

- Non-wetting to liquid non-ferrous metal
- Good Thermal Shock resistance;
- Excellent mechanical strength;
- Precisely machinable;
- Low thermal conductivity;
- Low heat loss;
- Stable dimension;

TYPICAL APPLICATION

Non-ferrous metal foundry, aluminum casting, steel ladle, car rear view mirror mold, etc. Shapes include canal, nozzles, casting boxes, spout, dip tube, pouring spouts, end dams, rings, floats, launders, etc.

SHAPE PHOTO



TECHNICAL DATA

Items	Unit	FCS-50	FCS-85C Carbon Fiber Reinforced	FCS-85G Glass Fiber Reinforced
Bulk Density	Kg/m ³	500±10%	850 ±10%	850 ±10%
Bending Strength	MPa	≥ 4.0	6	5
Compression Strength At 5% Deformation At Break	MPa	≥ 5.0	11	10
		--	15	12
Continuous Service Temp.	°C	1000	850	850
Linear Shrinkage 650°Cx24h, %	Linear	--	0.10	0.15
	Thickness	--	0.60	0.86
Linear Shrinkage 700°Cx24h, %	Linear	--	0.18	0.25
	Thickness	--	0.80	1.00
Linear Shrinkage 750°Cx24h, %	Linear	--	0.20	0.28
	Thickness	--	0.90	1.10
Linear Shrinkage 850°Cx24h, %	Linear	--	0.21	0.35
	Thickness	--	1.10	1.30
Linear Shrinkage 1000°Cx24h, %	Linear	≤1.5	0.36	0.49
	Thickness	1000°Cx3h	2.40	3.50
Thermal Conductivity W/m.K	100°C	--	0.103	0.113
	200°C	--	0.114	0.120
	300°C	≤0.110	0.124	0.121
	400°C	--	0.133	0.125
Chemical Analysis %	SiO ₂	≥ 48	49-52	49-52
	CaO	≥ 38	39-42	39-42
	Al ₂ O ₃	≤ 1	0.4-0.5	0.4-0.5
	Fe ₂ O ₃	≤ 0.5	0.3-0.4	0.3-0.4
Surface Condition	Double sanded; four side can be cut upon request. (FCS-50 need collect Extra Charge)			

PACKING

Cartons on pallets or as per customer's request.

