

ISOLITE®

Isolite range of insulating firebricks (IFB) are well known for its low thermal conductivity, relatively high cold crushing strength, low reheat shrinkage and small dimensional tolerance.

Isolite IFB are used for hot face lining and backup insulation in most kilns or furnaces.

In selecting Isolite IFB for hot face lining, classified temperature should be 300°C higher than hot face temperature.

In selecting Isolite IFB for backup insulation, classified temperature should be 100°C higher than interface temperature.

Products Properties

Note: LBK series with the

Grade	B4	B5	B6	B7	C1	C2	LBK-20M	LBK-20HS	LBK-23M
Classified Temperature	1200°C	1300°C	1400°C	1500°C	1300°C	1400°C	2000°F (1093°C)	2000°F (1093°C)	2300°F (1260°C)
Bulk Density (g/cm ³)	0.78	0.78	0.86	0.75	1.06	1.14	0.48	0.67	0.52
Thermal Conductivity (W/m·K) at 350 °C by JIS R 2616	0.24	0.24	0.27	0.30	0.33	0.39	0.16	0.24	0.17
at 400 °C by ASTM C182-88	0.25	0.25	0.28	0.31	0.34	0.40	0.17	0.25	0.18
at 600 °C by ASTM C182-88	0.28	0.28	0.31	0.34	0.37	0.43	0.20	0.29	0.21
at 800 °C by ASTM C182-88	0.30	0.31	0.35	0.38	0.40	0.48	0.25	0.33	0.26
at 1000 °C by ASTM C182-88			0.39	0.43		0.53			
at 1200 °C by ASTM C182-88									
Cold Crushing Strength (Mpa) by JIS R 2615	1.50	1.70	2.40	4.00	4.40	5.70	1.40	2.60	2.00
Modulus of Rupture (MPa) by JIS R 2619							1.00		1.20
Reheat Shrinkage (%) at () °C X 24 hrs by ASTM C210							0.00 (1065)		0.00 (1230)
at () °C X 8 hrs by JIS R 2613 - 1985	0.30 (1200)	0.30 (1300)	1.00 (1400)	0.90 (1500)	0.70 (1300)	0.80 (1400)		0.30 (1200)	
Chemical Composition (%)									
Al ₂ O ₃	41	41	42	62	40	41	41	41	41
SiO ₂	55	55	53	35	55	55	52	52	52
Fe ₂ O ₃	1.2	1.2	1.1	0.8	1.2	1.2	1.2	1.2	1.2
Recommended ISOLITE MORTAR	SAS - D		HAS - D		SAS - D	HAS - D	SAS - D		
Above products are manufactured in Malaysia									

Standard Square (Straight)	Side Arch				End Arch (Wedge)				Header (Key)						
		DY0	DY1	DY2	DY3		DT0	DT1	DT2	DT3		DB0	DB1	DB2	DB3
Length (mm) 230	230	230	230	230		230	230	230	230		230	230	230	230	
Width (mm) 114	114	114	114	114		114	114	114	114	a	114	114	114	114	
Width (mm)										b	108	105	85	65	
Thickness (mm) 65	a	65	65	65	65	a	65	65	65	65	65	65	65	65	65
Thickness (mm)	b	61	59	50	32	b	60	55	45	35					

The drawings show the following dimensions and features:

- Standard Square (Straight):** Length 230 mm, Width 114 mm, Thickness 65 mm.
- Side Arch:** Length 230 mm, Width 114 mm, Thickness 65 mm. The arch height is labeled 'b'.
- End Arch (Wedge):** Length 114 mm, Width 114 mm, Thickness 65 mm. The arch height is labeled 'b'.
- Header (Key):** Length 65 mm, Width 114 mm, Thickness 65 mm. The arch height is labeled 'b'.

Suffix "M" are based on ASTM specifications.

BK-23HS	LBK-26M	LBK-26HS	LBK-28M	LBK-30M	B1	B2	LHB	LBK-3000	LAP-165	ISO-COR	BAL-99	BAL-99M
2300°F (1260°C)	2600°F (1427°C)	2600°F (1427°C)	2800°F (1538°C)	2872°F (1578°C)	900°C	1000°C	1450°C	1600°C	1650°C	1800°C	1800°C	1800°C
0.68	0.77	0.70	0.70	0.75	0.65	0.65	1.20	0.78	0.80	1.28	1.56	1.58
0.25	0.25	0.27	0.25	0.28	0.17	0.20	0.55	0.32	0.36	0.70	1.22	1.45
0.26	0.26	0.28	0.26	0.29	0.17	0.20	0.56	0.33	0.37	0.70	1.18	1.41
0.30	0.29	0.33	0.29	0.33	0.18	0.22	0.60	0.38	0.42	0.71	1.06	1.24
0.34	0.33	0.38	0.33	0.38		0.24	0.65	0.44	0.48	0.74	1.00	1.18
	0.37	0.43	0.38	0.43			0.71	0.50	0.53	0.76	0.94	1.12
										0.77	0.94	1.12
2.70	1.40	3.10	3.20	4.10	3.00	3.20	11.0	3.20	4.00	6.40	12.0	27.0
	1.20		1.70	2.00				1.70	2.00	3.20	5.50	9.60
	-1.00 (1400)		-1.10 (1510)	-1.00 (1550)								
0.40 (1300)		1.00 (1400)			0.60 (900)	0.80 (1000)	0.30 (1450)	0.30 (1600)	0.30 (1650)	0.20 (1700)	0.30 (1700)	0.20 (1700)
41	44	46	66	70	12	12	67	72	73	83	99.2	99.3
52	49	47	31	27	78	79	31	26	25	16	0.4	0.4
1.2	1.1	1.1	0.7	0.7	4.2	3.6	0.6	0.6	0.5	0.3	0.1	0.1
HAS - D					ASDN - 10		SAS - D	HAS - D		MAS - D, MAS - W		
Above products are manufactured in Japan												

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Note: Data are average results of standard tests which are subject to variation and should not be used as specification. Our specialists are trained to assist you in material selection, engineering design and installation technique.