



Uniceram Advanced Materials, Inc.

INSULATION BRICKS

	HF15	HF60AL	HF60S	HF155	HF70AL	HF80AL	BA90AL
Classification temp. (°C/°F)	1400/ 2550	1500/ 2700	1500/ 2700	1550/ 2800	1650/ 3000	1700/ 3100	1800/ 3250
Properties measured at room temperature							
Density (gm/cc)	0.95-1.05	1.0-1.1	1.6	1.0	1.1	1.3	1.4
Apparent Porosity (%)	60	60	45	64	62	58.5	58
Cold crushing strength (Kg/cm²)	15-25	20	150	40	50	50	100
High temperature performance							
PLC after 2 hrs. at 1400°C	±0.7	-	-	-	-	-	-
after 2 hrs. at 1500°C	-	±0.5	±0.5	-	-	-	-
after 24hrs.at 1550°C	-	-	-	±1.0	-	-	-
after 2 hrs. at 1600°C	-	-	-	-	±1.0	-	-
after 24hrs.at 1600°C	-	-	-	-	-	±0.5	-
after 24hrs.at 1680°C	-	-	-	-	-	-	±0.1
Thermal Conductivity at mean temp. of							
400°C	-	-	-	0.30	0.40	0.48	1.12
600°C	0.26	0.35	0.50	-	-	-	-
800°C	-	-	-	0.40	0.45	0.54	1.20
1000°C	-	-	-	0.45	0.50	0.60	1.25
Chemical composition							
Al₂O₃ (%)	40	58-60	60	61	70	72	90
Fe₂O₃ (%)	1.8	1.5	1.5	0.90	1	0.8	0.2

The above values are from test samples and should be only used for guidance.

The data is gathered from standard size pressed bricks. These are subject to variation for larger pressed and hand moulded shapes.

Size tolerance: ± 1.5% or ±2 mm whichever is greater.



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INSULATION BRICKS (Continued)

	HF23	HF26	HF28	HF29	HF30	HF32
Classification temperature (°C/°F)	1300/ 2300	1450/ 2600	1550/ 2700	1600/ 2900	1650/ 3000	1700/ 3100
Properties measured at room temperature						
Density (gm/ cm³)	0.55	0.70	1.00	1.05	1.1	1.3
Modulus of rupture (Kg/cm²)	11	12	-	-	-	-
Cold crushing strength (Kg/cm²)		16	25	30	40	60
High temperature performance						
PLC after 24 hrs.						
At 1250°C	±0.6	±0.1				
1350°C	-	±0.5	±0.1			
1450°C	-	-	±0.5	±0.2		
1500°C	-	-	-	±0.5		
1550°C	-	-	-	-		
1600°C	-	-	-	-	±0.5	±0.5
Thermal Conductivity at mean temperature of						
400°C	0.16	0.22	0.36	0.37	0.40	0.50
600°C	0.18	0.24	0.40	0.41	0.44	0.54
800°C	0.20	0.27	0.44	0.45	0.48	0.58
1000°C	0.22	0.30	0.48	0.50	0.52	0.60
Chemical composition						
Al₂O₃ (%)	42.00	60.00	60.00	60.00	72.00	72.00
Fe₂O₃ (%)	0.65	0.70	0.80	0.80	0.70	0.60
CaO (%)	10.00	6.00				

The above values are from test samples and should be only used for guidance.



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INSULATION BRICKS (Continued)

	LW	LWS	HSI	CFI	CFS	HFI	HFK
Physical Properties							
P.C.E Orton	30	30	31	30	30	30	32
Service Temp (°C/°F)	1200/ 2200	1200/ 2200	1300/ 2350	1250/ 2270	1250/ 2270	1300/ 2350	1400/ 2550
B.D. gm/cc	1.0-1.1	1.2-1.3	1.6	0.7-0.8	0.55-0.65	0.8-0.9	1.0-1.1
A.P. %	55	50	45	65	70	60	55
CCS. Kg/cm²	30	70	150-200	10-15	8-10	15-20	40
Thermal conductivity at 600°C hot face K/cal/m/hr.°C max	0.40	0.50	0.60	0.30	0.195	0.35	0.45
Chemical Properties							
Al₂O₃%	30	30	35	30	30	30	40
Fe₂O₃ %	2.5	2.5	2.5	2.5	2.5	2.5	2.5

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Size tolerance: ± 1.5% or ±2 mm whichever is greater.



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INSULATION BRICKS (Continued)

	Uniceram P-50	Uniceram P-65	Uniceram P-70	Uniceram P-75
Physical Properties				
Service Temp (°C/°F)	1300/ 2370	1430/ 2600	1350/ 2400	1450/ 2600
B.D. gm/cc	0.5-0.55	0.60-0.65	0.65-0.80	0.75-0.80
A.P. %	80	75	70	68
CCS. Kg/cm²	11	35	15	40
Thermal Conductivity at				
400°C	0.14	0.2	0.21	0.25
800°C	0.18	0.3	0.25	0.35
1000°C	0.20	0.35	0.38	0.40
PLC after 24 hrs.				
At 1250°C	±0.6	-	-	-
1350°C	-	-	±1.0	-
1400°C	-	±1.5	-	±1.5
Chemical Properties				
Al₂O₃%	42	54	55-65	50-55
Fe₂O₃ %	0.65	1.5	1.0	1.2

The above values are from test samples and should be only used for guidance.

Size tolerance: ± 1.5% or ±2 mm whichever is greater.