

Regular Castables

BRAND NAME		KOSACAST									
ITEMS		-SP	-30	-40	-45	-50	-55	-60	-70	-90	-95
Max. Service Temp. (°C)		1300	1300	1400	1500	1550	1600	1650	1700	1800	1850
Dry Material Required. For Estimating (Ton/m³)		2.00	1.90	1.95	2.05	2.10	2.15	2.20	2.25	2.80	2.90
Permanent Linear Change (%)	110°C x 24h	-0.1	-0.1	-0.1	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
	1000°C x 3h	at 1200°Cx3h -0.4	at 1200°Cx3h -0.3	-0.2	-0.2	-0.2	-0.1	-0.2	-0.1	-0.1	-0.1
	1350°C x 3h	-	-	-0.3	-0.4	-0.4	-0.2	-0.3	-0.2	-0.2	-0.1
	1500°C x 3h	-	-	-	-	-	-	-0.4	-0.4	-0.3	-0.2
Cold crushing Strength (Modulus of Rupture) (Kg/cm²)	110°C x 24h	300 (60)	150 (40)	200 (50)	200 (50)	250 (40)	200 (35)	250 (40)	250 (50)	400 (70)	600 (100)
	1000°C x 3h	at 1200°C x 3h 250 (40)	at 1200°C x 3h 120 (30)	150 (40)	180 (40)	200 (30)	150 (30)	150 (30)	250 (40)	350 (60)	500 (90)
	1350°C x3h	-	-	200	300 (80)	250	200 (40)	250	300	400	600
	1500°C x 3h	-	-	-	-	-	-	350 (70)	350 (70)	500 (90)	800 (120)
Thermal Conductivity (Kcal/mh°C)	250°C	0.50	0.50	0.51	0.50	0.63	0.64	0.64	0.70	0.90	0.93
	550°C	0.54	0.55	0.60	0.54	0.72	0.70	0.76	0.77	0.95	0.98
	800°C	0.61	0.63	0.64	0.61	0.83	0.85	0.85	0.84	1.00	1.05
Chemical Composition (%)	Al ₂ O ₃	36	30	40	45	48	53	60	69	90	95
	SiO ₂	55	64	55	47	44	43	35	26	-	-
Water Required (%)		12	14	13	12	11	10	10	10	8	7
Setting Type		HYDRAULIC									
Installation Method		CASTING									
Applications		* General Kiln and Furnace * Reheating Furnace and Soaking Pit * Chemical Industry, etc.									

Regular Castables

BRAND NAME		KOSACAST							
ITEMS		ES	-40S	-45S	-50S	-50TP	-60S	-70S	-90S
Max. Service Temp. (°C)		1300	1400	1500	1600	1600	1650	1700	1800
Dry Material Required. For Estimating (Ton/m ³)		1.90	2.00	2.00	2.10	2.15	2.25	2.30	2.90
Permanent Linear Change (%)	110°C x 24h	-0.1	-0.05	-0.05	-0.05	-0.06	-0.05	-0.05	-0.05
	1000°C x 3h	at1200°C x 3h -0.4	-0.1	-0.1	-0.1	-0.4	-0.1	-0.1	-0.1
	1350°C x 3h	-	-0.5	-0.4	-0.3	-0.4	-0.3	-0.2	-0.2
	1500°C x 3h	-	-	-	-	-	-0.4	-0.4	-0.3
Cold crushing Strength (Modulus of Rupture) (Kg/cm ²)	110°C x 24h	400 (70)	350 (60)	350 (60)	400 (70)	150 (35)	400 (60)	500 (80)	600 (100)
	1000°C x 3h	at1200°C x 3h 250(50)	250 (40)	250 (40)	300 (50)	130 (25)	250 (40)	400 (70)	500 (90)
	1350°C x 3h	-	300 (50)	300 (50)	350 (80)	150 (40)	400 (60)	500 (80)	600 (100)
	1500°C x 3h	-	-	-	-	(120)	600 (100)	600 (100)	700 (120)
Thermal Conductivity (Kcal/mh°C)	250°C	0.50	0.52	0.52	0.65	0.65	0.64	0.71	0.93
	550°C	0.56	0.61	0.56	0.74	0.74	0.76	0.79	0.97
	800°C	0.65	0.66	0.67	0.84	0.86	0.87	0.85	1.03
Chemical Composition (%)	Al ₂ O ₃	30	40	47	49	50	60	70	90
	SiO ₂	60	52	45	43	40	34	25	-
Water Required (%)		13	13	13	11	14.0	10	9	8
Setting Type		HYDRAULIC							
Installation Method		CASTING							
Applications		* High Strength Abrasion Resistance * Cement Industry. etc.							

High Dense & Strength Castables

BRAND NAME		CRESTO							
ITEMS		-50	-60	-75	-85	-95	-75S	-85S	-90C
Max. Service Temp. (°C)		1500	1600	1700	1750	1800	1700	1750	1800
Dry Material Required. For Estimating (Ton/m ³)		2.4	2.65	2.75	3.1	3.2	2.8	3.1	3.1
Permanent Linear Change (%)	1350°C x 3h	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
	1500°C x 3h	-	-0.4	-0.4	-0.3	-0.4	-0.4	-0.3	-0.4
Cold crushing Strength (Modulus of Rupture) (Kg/cm ²)	110°C x 24h	500 (70)	600 (80)	700 (100)	800 (100)	800 (100)	700 (100)	800 (100)	800 (100)
	1350°C x 3h	700 (100)	800 (100)	800 (120)	1000 (150)	1200 (250)	800 (110)	900 (120)	1000 (150)
	1500°C x 3h	-	900 (120)	1000 (150)	1200 (200)	2000 (400)	800 (110)	1000 (140)	1200 (250)
Thermal Conductivity (Kcal/mh°C)	250°C	0.75	0.86	1.10	1.31	1.35	1.30	1.40	1.45
Chemical Composition (%)	Al ₂ O ₃	60	65	75	84	95	75	85	90
	CaO	2	2	2	2	2	SiC10	SiC10	Cr ₂ O ₃ 7
Water Required (%)		6.5	6.0	5.5	5.0	4.0	5.5	4.5	4.0
Setting Type		HYDRAULIC							
Installation Method		VIBRATING							
Applications		* Ladle Furnace Lining * Furnace Spouts and Roof * Impact pads and Wall Blocks * High Strength Abrasion Resistance. etc.							

High Dense & Strength Castables

BRAND NAME		CRESTO							
ITEMS		-91TL	-92TL	-65TD	90RH	-60BF	-70BF	-90BF	-72TP
Max. Service Temp. (°C)		1700	1700	1650	1800	1600	1700	1750	1700
Dry Material Required. For Estimating (Ton/m ³)		3.15	3.20	2.54	3.03	2.55	2.65	3.10	2.60
Permanent Linear Change (%)	1350°C x 3h	-	-	-0.2	-	-0.2	-0.2	-0.2	-
	1500°C x 3h	2.0	0.05	0.5	2.0	-	-	-	0.8
Cold crushing Strength (Modulus of Rupture) (Kg/cm ²)	110°C x 24h	570 (73)	410 (48)	580 (80)	100 (7)	450	500	700	(50)
	1350°C x 3h	-	-	-	-	530	600	1800	-
	1500°C x 3h	1110 (223)	1900 (250)	1250 (145)	200 (20)	-	-	-	(160)
Chemical Composition (%)	Al ₂ O ₃	91	92	65	90	60	70	90	72
	MgO	6	5	32	-	-	-	-	-
	SiO ₂	-	-	-	-	35	25	6	25
Water Required (%)		4.8	4.1	6.4	6.7	5.5	5.5	4.5	5.5
Setting Type		HYDRAULIC							
Installation Method		VIBRATING							
Applications		* Ladle Furnace Lining		* Tundish permanent Lining	* RH Degasser	* Blast Furnace Bosh Shell * Blast Furnace Hearth Bottom * Blast Furnace Ceramic Cup * Torpedo Ladle Car			

High Dense & Strength Castables

BRAND NAME		CRESTO							
ITEMS		-10CR	-30CR	-50CR	-80CR	-50CB	-75CB	-HCS	75SF
Max. Service Temp. (°C)		1,800	1,700	1,700	1,700	1,500	1,700	1,700	1,700
Dry Material Required. For Estimating (Ton/m ³)		3.20	3.25	3.40	3.65	2.40	2.80	2.85	2.75
Permanent Linear Change (%)	110°C x 24h	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
	1500°C x 3h	0.20	0.30	0.30	0.40	at 815°C x 3h -0.20	at 815°C x 3h -0.10	at 815°C x 3h -0.10	at 815°C x 3h -0.10
Cold crushing Strength (Modulus of Rupture) (Kg/m ²)	110°C x 24h	350 (70)	400 (80)	400 (80)	350 (70)	600 (90)	750 (110)	750 (150)	700 (100)
	1500°C x 3h	1000 (150)	1000 (150)	1100 (160)	1100 (160)	at 815°C x 3h 800 (120)	at 815°C x 3h 1000 (150)	at 815°C x 3h 1000 (150)	at 815°C x 3h 900 (120)
Chemical Composition (%)	Al ₂ O ₃	84	64	44	14	50	75	72	75
	Cr ₂ O ₃	10	30	50	80	-	-	-	-
Water Required (%)		6	5.5	5.5	6	7	5	6	5.5
Setting Type		HYDRAULIC							
Installation Method		VIBRATING							
Applications		* Melting Incinerator * Electric Arc Furnace for Mineral Wool Melting				* CFBC Boiler * Power Plant			* General kiln and Furnace * Reheating Furnace and Soaking Pit * Chemical Industry. etc.

High Dense & Strength Castables

BRAND NAME		CRESTO		
ITEMS		-75AL	-78AL	-87AL
Max. Service Temp. (°C)		1700	1700	1800
Dry Material Required. For Estimating (Ton/m ³)		2.80	2.74	2.96
Permanent Linear Change (%)	110°C x 24h	-0.05	-0.03	-0.01
	1500°C x 3h	at 1200°C x 3h -0.2	at 1200°C x 3h -0.2	at 1200°C x 3h -0.2
Cold crushing Strength (Modulus of Rupture) (Kg/cm ²)	110°C x 24h	1000 (150)	750 (110)	1150 (150)
	1500°C x 3h	at 1200°C x 3h 1000(150)	at 1200°C x 3h 1300(160)	at 1200°C x 3h 1300(160)
Thermal Conductivity (Kcal/mh°C)	250°C	-	-	-
Chemical Composition (%)	Al ₂ O ₃	75	78	85
	Cr ₂ O ₃	-	SiC 6	-
Water Required (%)		5	6	5
Setting Type		HYDRAULIC		
Installation Method		VIBRATING		
Applications		* Aluminum Melting Furnace		

No Cement Castables

BRAND NAME		KNCC				
ITEMS		-SC15BF	-MG25TD	-MG90TD	-65TD	-90S
Max. Service Temp .(°C)		1700	1700	1750	1650	1800
Dry Material Required. For Estimating (Ton/m³)		2.75	2.75	2.80	2.49	3.00
Permanent Linear Change (%)	110°C x 24h	-0.05	-0.07	-0.07	-0.05	-0.03
	1000°C x 3h	at 1350°C x 3h 0.1	at 1500°C x 3h 1.4	at 1500°C x 3h -0.1	at 1500°C x 3h 0.4	-0.15
Cold crushing Strength (Modulus of Rupture) (Kg/cm²)	110°C x 24h	400	400 (50)	500 (50)	450 (65)	400 (60)
	250°C x 3h	-	855 (100)	900	-	-
	1500°C x 3h	at1350°C x 3h 800	350 (120)	380	1000 (120)	120 (100)
Chemical Composition (%)	Al ₂ O ₃	75	63	0.4	66	90
	MgO		24	89	0.1	-
	SiO ₂	SiC 15	7.5	7	32	
Water Required (%)		12.0	5.2	4.8	8.8 (Sol)	-
Setting Type		SOL-GEL	HYDRAULIC		SOL-GEL	SOL-GEL REACTION
Installation Method		Shotcrete	CASTING			VIBRATING
Applications		* Blast Furnace Repair	* Tundish Dam, Weir & Impact pad * Tundish Permanent Lining			* General kiln and Furnace * Reheating Furnace and Soaking Pit * Chemical Industry. etc.

Acid Proof Castables

BRAND NAME		RESAC				
ITEMS		-10	-15	-22	-15G	-22G
Max. Service Temp. (°C)		500	800	1200	800	1200
Dry Material Required. For Estimating (Ton/m ³)		1.9	1.9	1.9	1.8	1.8
Permanent Linear Change (%)	110°C x 24h	-0.2	-0.2	-0.2	-0.2	-0.2
	1000°C x 3h	-	at 500°C x 3h -0.3	-0.5	at 500°C x 3h -0.4	-0.6
Cold crushing Strength (Modulus of Rupture) (Kg/cm ²)	110°C x 24h	120 (40)	120 (40)	120 (40)	100 (30)	100 (30)
	1000°C x 3h	-	at 500°C x 3h 120 (40)	150 (50)	at 500°C x 3h 100 (30)	120 (40)
Thermal Conductivity (Kcal/mh°C)	250°C	0.56	0.58	0.62	0.6	0.63
Chemical Composition (%)	SiO ₂	75	70	60	67	58
Water Required (%)		12	12	13	NOZZLE MIXING	
Setting Type		AIR SETTING				
Installation Method		CASTING			TROWELLING, GUNNING	
Applications		* Stack * Incinerator * Reactor. etc.				

Special Castables

BRAND NAME		SIC CASTABLE				KILN CAR CASTABLE		
ITEMS		CRT-SC10	CRT-SC30	CRT-SC50	CRT-SC70	CATOP-1	CATOP-2	CATOP-3
Max. Service Temp. (°C)		1500	1500	1500	1600	1400	1400	1600
Dry Material Required. For Estimating (Ton/m³)		2.35	2.45	2.5	2.6	1.95	1.65	2.1
Permanent Linear Change (%)	110°C x 24h	-0.05	-0.05	-0.05	-0.05	-0.05	-0.1	-0.05
	1000°C x 3h	-0.20	-0.2	-0.2	-0.2	-0.1	-0.2	-0.1
	1350°C x 3h		-0.3	-0.3	-0.3	0.1	-0.1	-0.2
Cold crushing Strength (Modulus of Rupture) (Kg/cm²)	110°C x 24h	450 (50)	600 (70)	600 (70)	600 (70)	200 (60)	150 (40)	200 (40)
	1000°C x 3h	500 (55)	700 (80)	700 (80)	700 (80)	150 (40)	100 (30)	150 (30)
	1350°C x 3h		1100 (150)	1100 (150)	1200 (160)	300 (80)	150 (40)	200 (40)
Chemical Composition (%)	Al ₂ O ₃	60	-	-	-	30	38	47
	SiO ₂	SiC:10	SiC:32	SiC:51	SiC:70	60	45	43
Water Required (%)		7.0	7.0	7.0	7.0	13.0	21.0	11.0
Setting Type		HYDRAULIC						
Installation Method		VIBRATING,CASTING				CASTING		
Applications		* Incinerator * Cement Preheater * High Strength, Abrasion Resistance, etc.				* Kiln Car		

Special Castables

BRAND NAME		SIC CASTABLE			
ITEMS		CRT-SC10G	CRT-SC30G	CRT-SC10SG	CRT-SC30SG
Max. Service Temp. (°C)		1500	1500	1500	1500
Dry Material Required. For Estimating (Ton/m ³)		2.10	2.15	2.20	2.25
Permanent Linear Change (%)	110°C x 24h	-0.05	-0.05	-0.05	-0.05
	1000°C x 3h	-0.40	-0.40	-0.20	-0.25
Cold crushing Strength (Modulus of Rupture) (Kg/cm ²)	110°C x 24h	200 (30)	250 (35)	400 (40)	500 (55)
	1000°C x 3h	300 (35)	400 (40)	450 (45)	650 (60)
Chemical Composition (%)	Al ₂ O ₃	60	40	-	-
	SiC	10	30	10	30
Water Required (%)		NOZZLE MIXING			
Setting Type		HYDRAULIC			
Installation Method		GUNNING			
Applications		* Incinerator * Cement Kiln * High Strength, Abrasion Resistance, etc.			

Special Castables

BRAND NAME		SIC CASTABLE				
ITEMS		CRT-SC15IR	CRT-SC-30SR	CRT-SC15MZ	CRT-SC30SZ	CRT-SC80BF
Max. Service Temp. (°C)		1650	1650	1700	1700	1800
Dry Material Required. For Estimating(Ton/m ³)		2.60	2.60	2.95	3.00	2.55
Permanent Linear Change(%)	110°C x 24h	-0.05	-0.05	-0.05	-0.05	0.05
	1000°C x 3h	0.0	0.0	0.0	0.0	0.0
	1500°C x 3h	0.6	1.0	0.7	1.0	0.6
Cold crushing Strength (Modulus of Rupture) (Kg/cm ²)	110°C x 24h	110	130	200	300	80
	1500°C x 3h	650	380	750	600	1000
Chemical Composition(%)	Al ₂ O ₃	65	55	75	62	10
	SiC	15	30	15	30	80
Water Required (%)		7.0	7.0	5.5	4.5	5.5
Setting Type		HYDRAULIC				
Installation Method		VIBRATING,CASTING				
Applications		* Blast Furnace Copper Stave Hot Face * Main Runner Metal Zone and Slag Zone * Iron Runner and Slag Runner				

Special Castables

BRAND NAME		MAGNESIA CASTABLE				SPECIAL CASTABLE	
ITEMS		TD-SP	KOSAGUN-30	KOSAMAG-92	KOSAMAG-95	KOSAMAG-SAREX	KOSAMAG-BAREX
Max. Service Temp. (°C)		1650	1650	1700	1800	1600	1600
Dry Material Required. For Estimating (Ton/m ³)		1.90	2.30	2.50	2.80	2.60	2.90
Permanent Linear Change (%)	1350°C x 3h	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1
	1500°C x 3h	-0.5	-0.4	-0.4	-0.2	-0.4	-0.3
Cold crushing Strength (Modulus of Rupture) (Kg/cm ²)	110°C x 24h	40	20	350	-	150 (40)	250 (50)
	1350°C x 3h	100	30	200	-	120 (30)	200 (40)
	1500°C x 3h	150	60	300	-	250 (50)	350 (70)
Thermal Conductivity (Kcal/mh°C)	250°C	-	-	-	-	8.90	1.19
Chemical Composition (%)	MgO	80	88	92	95	SiC:83	Cr ₂ O ₃ :35
	SiO ₂	-	-	-	-	-	-
Water Required (%)		18	11	-	-	-	8.0
Setting Type		HEAT SETTING				HYDRAULIC	
Installation Method		SPRAY	GUNNING	SHOVEL	STAMPING	CASTING	
Applications		* Electric Arc Furnace Bottom & Hearth * Open Heath Bottom * Tundish Wall & bottom				* Incinerator * Boiler	

Special Castables

BRAND NAME		MAGNESIA CASTABLE				
ITEMS		KD-ST5	KD-ST 75	KOSAGUN-30H	KOSAMAS-MG85TD	KOSAMAS-MG90TD
Max. Service Temp. (°C)		1750	1750	1650	1650	1700
Dry Material Required. For Estimating (Ton/m ³)		2.60	2.67	2.40	1.4	1.5
Permanent Linear Change (%)	1350°C x 3h	-0.1	-0.1	-0.2	0.0	0.0
	1500°C x 3h	-0.3	-0.2	-0.4	0.0	0.0
Cold crushing Strength (Modulus of Rupture) (Kg/cm ²)	110°C x 24h	-	-	20	(4.5)	(4.5)
	1350°C x 3h	-	-	50	-	-
	1500°C x 3h	-	-	90	(23)	(25)
Chemical Composition (%)	MgO	68	75	90	84	89
	SiO ₂	-	-	-	9	5
Water Required (%)		-	-	11	19	18
Setting Type		HEAT SETTING			HYDRAULIC	
Installation Method		STAMPING		GUNNING	SPRAY	
Applications		* Electric Arc Furnace Bottom & Hearth * Open Heath Bottom * Tundish Wall & bottom			* Tundish Wall & bottom	

Special Castables

BRAND NAME		SPECIAL CASTABLE
ITEMS		CRT-90RH
Max. Service Temp. (°C)		1800
Dry Material Required. For Estimating(Ton/m ³)		3.0
Permanent Linear Change(%)	110°C x 24h	-0.02
	1000°C x 3h	0.2
	1600°C x 3h	4.12
Modulus of Rupture (Kg/cm ²)	110°C x 24h	2.3
	1600°Cx3h	11.1
Chemical Composition(%)	Al ₂ O ₃	90
	MgO	4.5
Water Required (%)		7.5
Setting Type		HYDRAULIC
Installation Method		Injection Casting
Applications		* RH repair material

Regular Insulating Castables

BRAND NAME		KOSALITE							
ITEMS		-15	-18	-20	-22	-24	-26	-29	-SUPER
Max. Service Temp. (°C)		800	1000	1100	1200	1350	1400	1600	1700
Dry Material Required. For Estimating (Ton/m³)		0.85	1.10	1.15	1.20	1.25	1.35	1.50	1.50
Permanent Linear Change (%)	110°C x 24h	-0.1	-0.1	-0.1	-0.05	-0.05	-0.05	-0.05	-0.05
	1000°C x 3h	at 500°C x 3h -0.3	at 800°C x 3h -0.6	-0.40	-0.10	-0.50	-0.30	-0.20	-0.30
	1350°C x 3h	-	-	-	-	-	-	-0.40	-0.50
Cold crushing Strength (Modulus of Rupture) (Kg/cm²)	110°C x 24h	20 (10)	60 (20)	80 (30)	80 (30)	80 (30)	100 (40)	80 (30)	150 (40)
	1000°C x 3h	at 500°C x 3h 10 (5)	at 800°C x 3h 30 (10)	50 (20)	50 (20)	60 (20)	60 (20)	60 (20)	80 (30)
	1350°C x 3h	-	-	-	-	-	at 1200°C x 3h 70 (30)	110 (40)	100 (30)
Thermal Conductivity (Kcal/mh°C)	250°C	0.15	0.25	0.27	0.29	0.33	0.33	0.51	0.75
	550°C	0.18	0.29	0.31	0.32	0.38	0.37	0.56	0.81
	800°C	-	-	0.35	0.36	0.41	0.42	0.64	0.85
Chemical Composition (%)	Al ₂ O ₃	25	28	30	32	45	50	61	92
	SiO ₂	58	56	55	52	38	38	21	-
Water Required (%)		60	35	34	32	30	25	20	18
Setting Type		HYDRAULIC							
Installation Method		CASTING							
Applications		* Petrochemical Industry * Lining & Back up General Kiln & Furnace. etc.							

Regular Insulating Castables

BRAND NAME		KOSALITE						
ITEMS		-10VS	-15VS	-18VS	-20VS	-22VS	-24VS	-26VS
Max. Service Temp. (°C)		500	800	1000	1100	1200	1350	1400
Dry Material Required. For Estimating (Ton/m ³)		0.90	0.45	0.70	0.80	0.90	1.00	1.20
Permanent Linear Change (%)	110°C x 24h	-0.1	-0.1	-0.1	-0.1	-0.05	-0.05	-0.05
	1000°C x 3h	at 500°C x 3h -0.7	at 500°C x 3h -0.5	at 800°C x 3h -0.8	-0.8	-0.4	-0.4	-0.3
	1350°C x 3h	-	-	-	-	-	-	-
Cold crushing Strength (Modulus of Rupture) (Kg/cm ²)	110°C x 24h	40 (10)	10 (-)	15 (10)	30 (15)	40 (20)	60 (30)	60 (30)
	1000°C x 3h	at 500°C x 3h 20 (5)	at 500°C x 3h 5 (-)	at 800°C x 3h 10 (5)	20 (10)	30 (15)	40 (20)	50 (20)
	1350°C x 3h	-	-	-	-	-	-	at 1200°C x 3h 60 (30)
Thermal Conductivity (Kcal/mh°C)	250°C	0.17	0.12	0.14	0.15	0.21	0.25	0.27
	550°C	0.20	0.18	0.16	0.18	0.24	0.26	0.30
	800°C	-	-	-	0.21	0.28	0.30	0.32
Chemical Composition (%)	Al ₂ O ₃	15	22	27	29	34	44	52
	SiO ₂	65	60	56	53	48	40	33
Water Required (%)		55	100	70	48	48	46	35
Setting Type		HYDRAULIC						
Installation Method		CASTING						
Applications		* Petrochemical Industry * Lining & Back up General Kiln & Furnace. etc						

Special Insulating Castables

BRAND NAME		KOSALITE			BUMTITE		
ITEMS		-NO1	-NO2	-NO3	-C10	-C14	-C14G
Max. Service Temp.(°C)		1100	1000	1000	1000	1000	1000
Dry Material Required. For Estimating (Ton/m ³)		1.35	0.80	0.50	1.90	1.60	1.65
Permanent Linear Change (%)	110°C x 24h	-0.10	-0.15	-0.15	-0.10	-0.15	-0.15
	800°C x 3h	-0.80	-1.00	-1.30	-0.50	-0.80	-0.60
Cold crushing Strength (Modulus of Rupture) (Kg/cm ²)	Cured 1 Day	150	20	-	-	-	-
	Cured 3Day	250	25	5	-	-	-
	110°C x 24h	-	-	-	50 (10)	80 (20)	100 (40)
	800°C x 3h	-	-	-	40 (5)	60 (10)	80 (30)
Thermal Conductivity (Kcal/mh °C)	250°C	0.40	0.18	0.10	0.65	0.41	0.42
	550°C	0.43	0.21	0.13	0.72	0.59	0.61
Water Required (%)		28	58	100	16	25	-
Setting Type		HYDRAULIC			HYDRAULIC		
Installation Method		CASTING, TROWELLING			CASTING		GUNNING
Applications		* Petrochemical Industry * Boiler, Heater, Ducts			* Stacks * Ducts		

Insulating Castables for Gunning

BRAND NAME		KOSALITE					
ITEMS		-15G	-18G	-20G	-22G	-24G	-26G
Max. Service Temp.(°C)		800	1000	1100	1200	1350	1400
Dry Material Required. For Estimating (Ton/m³)		0.9	1	1.1	1.3	1.45	1.5
Permanent Linear Change (%)	110°C x 24h	-0.20	-0.20	-0.10	-0.10	-0.10	-0.10
	1000°C x 3h	at 500°C x 3h -0.50	at 500°C x 3h -0.30	-1.00	-0.50	-0.40	-0.40
Cold crushing Strength (Modulus of Rupture) (Kg/cm²)	110°C x 24h	30(15)	30(15)	30(15)	40(20)	80(30)	60(20)
	1000°C x 3h	at 500°C x 3h 20 (5)	at 500°C x 3h 20 (5)	20(10)	30(15)	40(20)	40(15)
Chemical Composition (%)	Al ₂ O ₃	26	29	32	38	42	55
	SiO ₂	57	55	58	47	44	32
Water Required (%)		NOZZLE MIXING					
Setting Type		HYDRAULIC					
Installation Method		GUNNING					
Applications		* General Kiln & Furnace(Lining & Back up) * Petrochemical Industry					

Regular Plastics Refractories

BRAND NAME		KORAM					
ITEMS		-45	-60	-70	-75	-80	-90
Max. Service Temp. (°C)		1650	1700	1750	1750	1800	1850
Dry Material Required. For Estimating (Ton/m ³)		2.35	2.50	2.70	2.74	2.90	3.10
Permanent Linear Change (%)	110°C x 24h	-0.70	-0.60	-0.40	-0.40	-0.50	-0.70
	1350°C x 3h	-0.10	-0.10	-0.30	-0.30	-0.40	-0.40
	1500°C x 3h	0.10	-0.50	-0.10	-0.8	-0.50	-0.70
Cold crushing Strength (Modulus of Rupture) (Kg/cm ²)	110°C x 24h	80 (20)	120 (40)	150 (50)	150 (30)	150 (50)	200x (60)
	1350°C x 3h	100 (60)	300 (60)	400 (70)	-	500 (100)	500 (120)
	1500°C x 3h	100 (60)	400 (80)	500 (100)	500 (150)	600 (120)	600 (150)
Thermal Conductivity (Kcal/mh°C)	550°C	0.85	0.89	1.18	1.19	1.20	1.25
	1000°C	0.94	1.02	1.33	1.14	1.35	1.38
Chemical Composition (%)	Al ₂ O ₃	44	58	71	75	83	92
	SiO ₂	54	30	26	20	12	6
Setting Type		AIR SETTING					
Installation Method		RAMMING					
Applications		* General Kiln & Furnace * Boiler & Chemical Industry. * Reheating Furnace & Soaking Pit * Incinerator & Pulp Industry. etc.					

Regular Plastics Refractories

BRAND NAME		KORAM	
ITEMS		-SC15BF	-SC20BF
Max. Service Temp.(°C)		1700	17
Dry Material Required. For Estimating (Ton/m³)		2.50	2.40
Permanent Linear Change (%)	110°C x 24h	-0.2	-0.25
	1500°C x 3h	1.5	2.0
Cold crushing Strength (Modulus of Rupture) (Kg/cm²)	110°C x 24h	220	230
	1500°C x 3h	110	115
Chemical Composition (%)	Al ₂ O ₃	-	-
	SiO ₂	15	20
Setting Type		AIR SETTING	
Installation Method		RAMMING	
Applications		* Blast Furnace Tap Hole Face * Blast Furnace Runner Repair	

Regular Plastics Refractories

BRAND NAME		KORAM						
ITEMS		-30	-40	-SP	-Chrome	-SiC	SUPER RAM-S	SUPER RAM
Max. Service Temp. (°C)		1400	1600	1500	1650	1600	1650	1650
Dry Material Required. For Estimating (Ton/m³)		2.25	2.3	2.3	3.2	2.3	2.4	2.4
Permanent Linear Change (%)	110°C x 24h	-0.10	-0.70	-0.10	-0.50	-0.70	-0.65	-0.65
	1350°C x 3h	-0.90	-0.01	-0.90	-0.60	-0.40	0.05	-0.05
	1500°C x 3h		0.10		-0.20	0.2	-0.10	-0.10
Cold crushing Strength (Modulus of Rupture) (Kg/cm²)	110°C x 24h	40 (20)	40 (20)	40 (20)	200 (80)	50 (20)	60 (20)	40 (20)
	1350°C x 3h	200 (40)	200 (40)	200 (40)	400 (120)	100 (40)	100 (40)	80 (30)
	1500°C x 3h	-	-	-	500 (140)	150 (50)	120 (50)	100 (40)
Thermal Conductivity (Kcal/mh°C)	550°C	0.82	0.87	0.83	1.43	0.82	0.80	0.81
	1000°C	0.90	0.93	0.92	1.56	0.90	0.88	0.89
Chemical Composition (%)	Al ₂ O ₃	32	40	35	Cr ₂ O ₃ :30	SiC+C:10	42	40
	SiO ₂	-	54	-	-	-	53	55
Setting Type		AIR SETTING					HEAT SETTING	
Installation Method		RAMMING			STAMPING		RAMMING	
Applications		* General Kiln & Furnace * Boiler & Chemical Industry. * Reheating Furnace & Soaking Pit * Incinerator & Pulp Industry. etc.						

Ramming & Stamp Mixes

BRAND NAME		RAMMING & STAMP				
ITEMS		KORAM-BA	KORAM-MA	KORAM-25WAM	KORAM-ST	KORAM-CABO
Max. Service Temp. (°C)		1800	1750	1650	1600	1700
Dry Material Required. For Estimating (Ton/m ³)		3.10	2.90	2.35	2.30	2.40
Permanent Linear Change (%)	110°C x 24h	-0.05	-0.10	-0.10	-0.20	-0.20
	1350°C x 3h	-0.15	-0.20	1.00	1.50	1.00
	1500°C x 3h	-0.30	0.30	1.50	-	1.50
Cold crushing Strength (Modulus of Rupture) (Kg/cm ²)	110°C x 24h	400 (80)	300 (60)	80 (30)	80 (20)	80 (30)
	1350°C x 3h	500 (100)	400 (80)	120 (50)	60 (30)	100 (40)
	1500°Cx3h	600 (150)	500 (100)	120 (50)	-	120 (50)
Thermal Conductivity (Kcal/mh°C)	550°C	1.25	1.18	1.05	0.80	1.10
	800°C	1.32	1.30	1.16	0.89	1.19
Chemical Composition (%)	Al ₂ O ₃	85	72	50	28	60
	SiO ₂	-	-	47	SiC+C 22	SiC 22
Setting Type		AIR SETTING				
Installation Method		RAMMING				
Applications		* General Kiln & Furnace * Boiler & Chemical Industry. * Reheating Furnace & Soaking Pit * Incinerator & Pulp Industry. etc.				

Ramming & Stamp Mixes

BRAND NAME		STAMP FOR INDUCTION			PATCHING MATERIAL			
ITEMS		KOSAVA-85	KOSAVA-90	KOSAVA-MAG	ALRAM-70	SIRAM-70	ALRAM-90	SIRAM-90
Max. Service Temp. (°C)		1700	1800	1800	1750	1450	1800	1450
Dry Material Required. For Estimating (Ton/m³)		2.80	2.95	3.00	2.70	2.60	2.95	2.65
Permanent Linear Change (%)	110°C x 24h	-0.10	-0.10	-	-1.00	-0.10	-1.00	-0.10
	1350°C x 3h	0.2	0.1	-	0.10	at 1000°C x 3h -0.70	-0.60	at 1000°C x 3h -0.80
	1500°C x 3h	0.80	0.50	-	-0.40	-	-0.80	-
Cold crushing Strength (Modulus of Rupture) (Kg/cm²)	110°C x 24h	-	-	-	200(50)	100(20)	200(50)	100(20)
	1350°C x 3h	-	-	-	350(70)	at 1000°C x 3h 700(100)	350(70)	at 1000°C x 3h 700(100)
	1500°C x 3h	-	-	-	450(90)	-	500(100)	-
Thermal Conductivity (Kcal/mh °C)	550°C	-	-	-	-	3.70	-	5.50
	800°C	-	-	-	-	3.87	-	6.45
Chemical Composition (%)	Al ₂ O ₃	88	96	MgO 95	70	SiC 73	91	SiC 88
	SiO ₂	-	-	-	22		4	-
Setting Type		HEAT SETTING			AIR SETTING			
Installation Method		STAMPING			PATCHING			
Applications		* Induction Furnace			* General Kiln & Furnace * Incinerator			

Tap Hole Plugging Material

BRAND NAME		THPM			
ITEMS		-HA	-AS	-HS	-ECO
Max. Service Temp. (°C)		1700	1700	1700	1700
Dry Material Required. For Estimating (Ton/m ³)		2.50	2.50	2.50	2.50
Permanent Linear Change (%)	1500°C x 3h	-0.1	-0.15	-0.1	-0.15
Cold crushing Strength (Modulus of Rupture) (Kg/cm ²)	1500°C x 3h	100	100	100	100
Chemical Composition (%)	Al ₂ O ₃	40	35	30	35
	SiO ₂	10	10	10	10
Setting Type		HEAT SETTING			
Installation Method		MUD GUN INJECTION			
Applications		* Tap Hole Clay			

Heat Setting Mortar

BRAND NAME		HIGH-ALUMINA			FIRECLAY		HIGH-SILICA	
ITEMS		HAM-36	HAM-38	HAM-40	FCM-32	FCM-34	HSM-1	HSM-2
Refractoriness (SK)		36	38	40	32	34	27	30
Chemical Composition (%)	Al ₂ O ₃	47	65	75	27	37	SiO ₂ 85	SiO ₂ 90
	Fe ₂ O ₃	3	3	3	3.5	3.5	-	-
Grain Size(%)	+1.00mm	0	0	0	+1.4mm 0	+1.4mm 0	0	0
	-0.074mm	40≤	50≤	50≤	30≤	30≤	50≤	50≤
Bonding Strength(Kg/cm ²)	1400°C x 3h	25	25	25	10	15	-	-
Bonding Time (min)		1 ~ 3						
Applications		* Brick (SK 36,35)	* Brick (SK 38,37)	* Brick (SK 40,39)	* Brick (SK 32,31)	* Brick (SK 34,33)	* Ladle Brick	* General Silica Brick

Air Setting Mortar

BRAND NAME		HIGH-ALUMINA			FIRECLAY		
ITEMS		HAMA-36	HAMA-38	HAMA-40	FCMA-30	FCMA-32	FCMA-34
Refractoriness (SK)		36	38	40	30	32	34
Chemical Composition (%)	Al ₂ O ₃	50	70	85	24	33	40
	Fe ₂ O ₃	3	3	3	3.5	3.5	3.5
Grain Size (%)	+1.3mm	20≥	10≥	10≥	20≥	20≥	20≥
	-0.074mm	50≤	50≤	50≤	30≤	30≤	40≤
Bonding Strength (Kg/cm ²)	1300°C x 3h	40	40	40	at 1100°C x 3h 25	at 1100°C x 3h 25	30
Applications		* Brick (SK 36,35)	* Brick (SK39,37)	* Brick (SK 40,39)	* Brick (SK 30)	* Brick (SK 32,31)	* Brick (SK 34,33)

Special Mortar

BRAND NAME		ALUMINA				SPECIAL BOARD MORTAR	SIC-CABON		
ITEMS		SLIDE DEMENT	KAMS-16	SUPER SPAM	SPAM		SICA-M	SICA-S	SICA-AS
Refractoriness(SK)		37	34	38	36	-	-	-	-
Chemical Composition (%)	Al ₂ O ₃	80	45	70	55	-	30	SiC75	60
	Fe ₂ O ₃	2	2.5	2	2	-	SiC+C:30	-	SiC+C:15
Bonding Strength (Kg/cm ²)	110°C x 24h	5	80	20	20	10	15	15	10
	1400°C x 3h	10	100	60	60	15	50	50	50
Grain Size (%)	TopSize (mm)	0.5	-	0.5	0.5	0.8	-	-	-
	-0.074mm	55≤	50≤	50≤	50≤	60≤	50≤	50≤	50≤
Applications		* Slide Gate Valve	* High Bonding Strength	* Blast Furnace Hot Blast Stove (Phosphate Bond)		* Silica Board	* Taphole SiC Bricik	* SiC Brick	* Al ₂ O ₃ SiC Brick
Type		Wet (Can Pack)	Wet (Can Pack)	Dry	Dry	Dry Wet	Dry Wet	Dry	Dry

Insulating Mortar

BRAND NAME		INSULATING MORTAR			ZIRCON	ACID PROOF		BASIC	
ITEMS		INMA-1	INMA-2	INMA-3	ZIRMO-30	APM-1	APM-2	MM-1	MM-2
Refractoriness(SK)		-	-	-	34	-	-	40	40
Chemical Composition (%)	Al ₂ O ₃	-	-	-	ZrO ₂ 52	-	-	85	60
	Fe ₂ O ₃	-	-	-	2	SiO ₂ 55	SiO ₂ 80	-	Cr ₂ O ₃ 10
Grain Size (%)	+1.00mm	20≥	20≥	20≥	20≥	-	-	10≥	10≥
	-0.074mm	30≤	30≤	30≤	50≤	40≤	40≤	60≤	60≤
Bonding Strength (Kg/cm ²)	1400°C x 3h	at 1100°Cx 3h 10	10	10	40	at 1100°Cx 3h 10	-	30	7
Applications		* Insulating Brick 1200°C	* Insulating Brick 1200~1400°C	* Insulating Brick 1400°C≤	* Zircon Ladle Brick	* Acid Proof Brick	* Acid Proof Brick	* Burned MgO Brick * Unburned MgO Brick	* Burned MgO Cr ₂ O ₃ Brick