

KUMAR CERAMICS PRIVATE LIMITED



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PRICE LIST NO. : KCPL / 11 / 2018

REFRACTORY MUFFLE T (End Pieces) to withstand			IOUT PLUGS	0 •		
LENGTH		I/D	O/D	SUITABLE	PRICE	
MM	ММ	ММ	HEATING RODS	INR		
200	571					
200		55	62	2	522	
TOLERANCE : +/- 2 MM IN O/D & I						
PLUGS (END PIECE) WITH	46					
PLUGS (END PIECE) WITH THREE HOLES SUITABLE FOR 62 MM O/D MUFFLE TUBE						

MATERIAL GRADE: K-99 REFRACTORY ROUND MUFFLES OPEN BOTH ENDS to withstand temperature upto 1800 C.							
OUTER MM	37	40	44	56	60		
DIAMETER							
INNER MM	30	33	37	48	55		
LENGTH	PRICEININR						
OVER UPTO							
100 MM 200 MM	1484	1733	1955	3010	3679		
201 MM 300 MM	2144	2432	2934	4387	5038		
301 MM 400 MM	2847	3315	3995	5932	7018		
401 MM 600 MM	4249	4949	5967	8873	10185		
601 MM 800 MM	5706	6637	7996	12360	13602		
801 MM 1000 MM	8629	10029	12065	17878	20476		
1001 MM 1200 MM	8728	10128	12164	17975	20573		
TOLERANCE : +/- 2 MM IN O/D & I/D & 3 MM IN LENGTH.							

MATERIAL GRADE: K-60

MATERIAL GRADE: K-6	50				6	`				
REFRACTORY ROUND MU	IFFLES OPI	EN BOTH	ENDS		- f(_)	ń –				
to withstand temperatu	re upto 16	00 C.				y –				
-										
OUTER MM	37	40	44	48	58	62	65	75	85	115
DIAMETER										
INNER MM	30	33	37	40	50	56	58	65	75	100
LENGTH					PRIC	EININ	R			
OVER UPTO										
101 MM 200 MM	269	323	355	404	539	809	809	1276	2156	2803
201 MM 300 MM	359	431	474	539	719	1078	1078	1702	2697	3504
301 MM 400 MM	449	539	593	674	898	1348	1348	2125	3883	5048
401 MM 500 MM	647	775	854	970	1294	1942	1942	3061	4843	5608
501 MM 600 MM	807	968	1053	1211	1614	2421	2421	3402	5931	7710
601 MM 700 MM	988	1186	1305	1482	1976	2965	2965	4678	7550	9814
701 MM 800 MM	1258	1509	1662	1886	2515	3775	3775	5953	8628	11215
801 MM 900 MM	1437	1723	1898	2156	2875	4314	4314	6803	9706	12617
901 MM 1000 MM	1617	1940	2136	2425	3234	4853	4853	7654	10245	13318
1001 MM 1100 MM	1707	2048	2255	2560	3414	5123	5123	8080	10784	14020
1101 MM 1200 MM	1797	2156	2372	2695	3593	5392	5392	8505	13454	17492
1201 MM 1300 MM	2243	2690	2960	3362	4482	6728	6728	10611	16785	21823
1301 MM 1450 MM	2982	3577	3936	4471	5960	8947	8947	14114	17894	23264
OLERANCE : +/- 2 MM IN O/D & I/D & 3 MM IN LENGTH.										



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MATERIAL GRADE: K-80)					$\overline{\mathbf{a}}$				
REFRACTORY ROUND MUFFLES OPEN BOTH ENDS										
to withstand temperature	o withstand temperature upto 1700 C.									
OUTER MM	37	40	44	48	58	65	75	85	100	120
DIAMETER										
INNER MM	30	33	37	40	50	58	65	75	90	100
LENGTH					PRIC	EININ	R			
OVER UPTO										
101 MM 200 MM	520	625	757	901	1314	1603	2201	3161	3218	3379
201 MM 300 MM	781	939	1134	1350	2026	2475	3297	4743	4830	5072
301 MM 400 MM	1065	1276	1538	1803	2656	3352	4413	6357	6475	
401 MM 500 MM	1326	1588	1917	2244	3337	4207	5552	7967	8114	
501 MM 600 MM	1604	1926	2307	2702	4018	4967	6633	9496	9673	
601 MM 700 MM	1855	2227	2692	3199	4677	5856	8836	11132	11339	
701 MM 800 MM	2138	2565	3101	3679	5261	6733	9992	12754	12990	
801 MM 900 MM	2409	2889	3450	4092	5920	7482	11176	14337	14604	
901 MM 1000 MM	2651	3179	3849	4566	6601	8381	12181	15965	16263	
1001 MM 1100 MM	2661	3191	4232	5023	7382	9172	13268	17492	17819	
1101 MM 1200 MM	3220	3865	4630	5491	8163	9909	16534	19043	19399	
1201 MM 1300 MM	4012	4811	5764	6837	10163	12336	20563	23706	24149	
TOLERANCE : +/- 2 MM IN O/D & I/D & 3 MM IN LENGTH.										





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KUMAR Alumina Lab-ware (60%) products:-

<u>KUMAR K-60 Alumina Lab-wares</u> are made from Mullite Grains. These can withstand very high temperature and offer good chemical resistance at high temperature. These Lab-wares are made by slip casting process/extrusion process and the purity of sintered alumina is maintained to 60% (approx.).

The Chemical Composition of our K-60 Alumina Products is:

	Al ₂ O ₃	59.78
	SiO ₂	35.06
	Fe ₂ O ₃	0.42
Composition (%)	Na ₂ O	0.25
	MgO	1.88
	CaO	1.81
	TiO ₂	0.35
	K ₂ O	0.18
	LOI	0.27

Fired density is 2.8 gm/cc.

Colour and Lustre: White colour with vitreous luster, translucent.

Guidelines for use of K-60 High Alumina Products:

- Alumina products should be completely dry before usage. If they get wet, let the crucibles or tubes dry naturally. If these have to be dried in a dryer or an oven, care should be taken that the drying takes place slowly.
- To prevent thermal stress cracks on the lab-ware products, temperature change rate should not exceed 150° C/Hr.
- Avoid contact of heated alumina products with a cold surface.
- Alumina crucibles/tubes should not be heated by torch or furnaces that cannot control temperaturecontrol rate. The uneven heating can cause cracks
- Particular shapes of the Lab-ware products are suitable for specific uses. Hence, it is the responsibility of the user to determine the suitability of the product as per his use.
- Improper loading of materials in the alumina lab-wares should be avoided as this may cause uneven heating of the lab-ware resulting in cracks

Recommended Usage:

60% alumina wares are useful to chemists, metallurgists and other high temperature works demanding results free of any contamination. These also find application in process equipments and scientific equipment. These are meant for use in reducing and oxidizing atmospheres, and these offer high resistance to alkalies and other fluxes. These are suitable for glass melting process including borosilicate glass.

The Characteristic Features of High Alumina Products:

The high alumina-wares have excellent Thermal Conductivity, high mechanical strength, excellent electrical insulation, zero open porosity, and a high degree of chemical inertness. These chemical-wares, having high temperature tolerance, are suitable under conditions of irradiation and are compatible in reactor design. The products have been tested to be ultra-high vacuum compatible.

Some of the KUMAR brand High Alumina Lab-wares are:

High Alumina Boats, High Alumina Crucibles, High Alumina Trays and Dishes, High Alumina Sleeves/Beads and High Alumina Tubes.



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KUMAR Alumina Lab-ware (99.8%) products:-

<u>KUMAR Alumina Lab-wares</u> are made from ALCOA Alumina imported from North America. These can withstand very high temperature and offer good chemical resistance at high temperature. These Lab-wares are made by slip casting process/extrusion process and the purity of sintered alumina is maintained to more than 99.7%.

The Chemical Composition of our Alumina Products is:

	Al ₂ O ₃	>99.8		
	SiO ₂	<0.03		
	Fe ₂ O ₃	<0.02		
Composition (%)	Na ₂ O	<0.07		
	MgO	<0.05		
	CaO	<0.02		

Fired density is 3.90 gm/cc.

Colour and Lustre: Ivory colour with vitreous luster, translucent.

Guidelines for use of High Alumina Products:

- Alumina products should be completely dry before usage. If they get wet, let the crucibles or tubes dry naturally. If these have to be dried in a dryer or an oven, care should be taken that the drying takes place slowly.
- To prevent thermal stress cracks on the lab-ware products, temperature change rate should not exceed 150° C/Hr.
- Avoid contact of heated alumina products with a cold surface.
- Alumina crucibles should not be heated by torch or furnaces that cannot control temperature-control rate. The uneven heating can cause cracks
- Particular shapes of the Lab-ware products are suitable for specific uses. Hence, it is the responsibility of the user to determine the suitability of the product as per his use.
- Improper loading of materials in the alumina lab-wares should be avoided as this may cause uneven heating of the lab-ware resulting in cracks

Recommended Usage:

99.8% alumina wares are useful to chemists, metallurgists and other high temperature works demanding results free of any contamination. These also find application in process equipments and scientific equipment. These are meant for use in reducing and oxidizing atmospheres, and these offer high resistance to alkalies and other fluxes. These are suitable for glass melting process including borosilicate glass.

The Characteristic Features of High Alumina Products:

The high alumina-wares have excellent Thermal Conductivity, high mechanical strength, excellent electrical insulation, zero open porosity, and a high degree of chemical inertness. These chemical-wares, having high temperature tolerance, are suitable under conditions of irradiation and are compatible in reactor design. The products have been tested to be ultra-high vacuum compatible.

Some of the KUMAR brand High Alumina Lab-wares are:

High Alumina Boats, High Alumina Crucibles, High Alumina Trays and Dishes, High Alumina Sleeves/Beads and High Alumina Tubes.