

## DESCRIPTION

Salamander Super is a ceramics bonded clay graphite crucible. The smaller sizes are typically used to melt precious metals, and the larger sizes are suitable for both ferrous and non ferrous alloys.

## APPLICATIONS

Salamander Super are used in fuel and medium / high frequency induction furnaces.

## TYPICAL METAL CASTING TEMPERATURE

1562°F—2912°F • 850°C—1600°C

## PERFORMANCE CHARACTERISTICS

- Clean melting
- Good thermal conductivity
- Good resistance to chemical corrosion

## IDENTIFICATION

Salamander Super crucibles are colored black, or are unpainted.

## PATTERN RANGE

Salamander Super crucibles are available in a large range of bilge sizes and A shapes.

## QUALITY

Salamander Super crucibles are manufactured to ISO9001:2000 quality standards.



## PREHEATING / FIRST USE

The basic procedure for preheating Salamander Super in fuel fired and induction are similar.

The furnace should be heated slowly up to 392°F and held for 20 minutes. Then heat at low power up to 1112°F, avoiding local impingement of flame. Then heat at full power to reach a bright red color (1600°F).

## CHARGING

The crucible should be charged while still hot. The charge should be loosely placed in the crucible vertically so as to avoid bridging. Returns should be added first with ingots on top. Tongs should be used to place ingots.

## FULL LINE OF CRUCIBLES TO MEET EVERY APPLICATION



**EXCEL, HIMELT**  
Roller-Formed SIC



**EXCEL E**  
Roller-Formed SIC



**INDUX**  
Clay Graphite



**STARRBIDE**  
Roller-Formed SIC



**SYNCARB**  
ISO-Pressed Clay Graphite



**ULTRAMELT**  
ISO-Pressed SIC



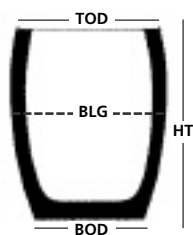
PART #	Dimensions: IN					Capacity: LBS		Metric-Dimensions: MM					Capacity: KG	
	<b>SALAMANDER SUPER BILGES</b>	TOD	HT	BOD	BLG	Wall	Al	Brass	TOD	HT	BOD	BLG	Wall	Al
0 IH	2 1/8	2 1/8	1 1/4	2 1/8	1/4	0.07	0.2	54	54	32	54	7	0.03	0.09
00 IH	2 1/4	2 1/4	1 1/2	2 1/4	1/4	0.15	0.5	57	57	38	57	7	0.07	0.20
0000 IH	2 7/8	3	1 7/8	2 7/8	1/4	0.39	1.2	73	76	48	73	7	0.18	0.54
1 IH	3 1/4	3 1/2	2 1/2	3 1/8	1/4	1.0	3.0	81	90	63	79	7	0.44	1.34
1 L IH	3 7/8	4	3 5/8	3 5/8	1/4	1.1	3.2	98	102	92	92	7	0.50	1.45
2 C/G	3 3/4	4 1/2	2 7/8	3 3/4	3/8			95	114	73	94	10		
2 IH	4	4 1/2	2 7/8	3 7/8	3/8	1.5	4.7	103	117	73	98	10	0.70	2.15
2 IH HW	4	4 1/2	2 7/8	3 7/8		1.5	4.7	103	117	73		10	0.70	2.15
2 L IH	4	4 5/8	2 5/8	3 7/8	3/8			102	117	67	98	10		
3 IH	4 1/4	5	2 3/4	4 1/4	1/2	2.8	8.5	108	128	73	108	12	1.25	3.86
3 IH HW	4 1/4	5	2 3/4	4 1/4		2.8	8.5	108	128	73		12	1.25	3.86
4 S IH	4 3/4	5 3/4	3 1/4	4 5/8	1/2	3.5	11	120	146	84	117	12	1.58	4.85
4 S NL IH	4 3/4	5 3/4	3 1/4	4 5/8	1/2	3.5	11	120	146	84	117	12	1.58	4.85
4 C/G	4 5/8	6	3 1/8	4 5/8	1/2			118	152	79	116	13		
4 IH	5	5 3/4	3 1/8	5 1/8	1/2	4.0	12	127	146	79	130	13	1.80	5.53
5 IH	5 1/4	6 1/8	3 3/8	5 1/4	1/2	4.1	13	133	156	86	133	13	1.88	5.78
6 C/G	5 1/4	6 1/2	3 3/4	5 1/4	9/16			133	165	98	133	14		
6 IH	5 3/8	6 5/8	3 5/8	5 3/8	9/16	5.0	15	145	168	72	137	14	2.27	6.99
7 IH	5 1/2	6 7/8	4	5 1/2	9/16	5.9	18	140	175	102	140	14	2.65	8.16
8 C/G	5 3/4	7 1/4	4 1/4	5 3/4	9/16			149	181	108	149	14		
8 IH	5 3/4	7 1/8	4	5 3/4	9/16	6.7	21	150	182	99	146	14	3.05	9.39
9 IH	6	7 1/2	4 1/8	6	9/16	9.4	29	162	195	106	152	14	4.28	13.15
10 IH	6 1/8	8 1/4	4 3/4	6 5/8	9/16	11.7	36	175	204	122	168	15	5.31	16.33
12 IH	6 1/2	8 3/8	5 1/8	7	5/8	13.7	42	165	212	130	178	16	6.19	19.05
14 IH	6 7/8	8 7/8	5 1/4	7 1/4	5/8	15.6	48	178	228	129	187	16	7.08	21.77
16 C/G	7	9 1/4	5 1/4	7 1/5	11/16			176	235	133	183	17		
16 S-1	7	8 1/2	5 1/2	7 1/2	11/16			178	216	140	191	17		
16 IH	7	9 1/2	5 1/2	7 1/2	11/16	17	53	178	241	140	191	17	7.81	24.04
18 IH	7 1/4	9 7/8	5 3/4	8 5/8	5/8	21	64	184	251	146	219	17	9.43	29.03
18 C/G	7 3/8	10	5 3/4	8	5/8			186	249	148	202	17		
20 IH	7 7/8	10	6	8 3/8	3/4	24	74	200	257	155	212	18	10.91	33.57
20 IH TW	7 7/8	10	6	8 3/8				200	257	155	212			
25 C/G	8 1/4	11	6 2/4	8 7/8	3/4			208	278	165	225	18		
30 IH	8 5/8	11 1/2	6 3/4	9 1/4	13/16	34	104	219	292	171	236	21	15.33	47.17
35 IH	9 1/8	12 1/4	7 1/8	10 5/8	13/16	39	119	232	310	181	252	21	17.54	53.98
40 IH	9 1/2	12 3/8	7 1/2	10 1/8	13/16	44	134	241	315	191	262	21	19.75	60.78
45 IH	9 7/8	12 3/4	7 3/4	10 5/8	7/8	51	157	250	325	197	264	23	23.14	71.22
50 IH	10 1/4	13 5/8	8	11	7/8	58	179	258	346	200	282	23	26.39	81.19
60 IH	10 7/8	14 1/2	8 5/8	11 3/4	7/8	68	209	276	361	220	299	23	30.81	94.80
70 IH	11 1/4	15 1/8	9	12 1/4		78	239	289	381	222	310		35.23	108.41
80 IH	11 3/4	15 5/8	9 1/4	12 3/4		87	269	303	400	238	330		39.66	122.02
90 IH	12 1/8	16 1/4	9 5/8	13 1/8		97	298	313	400	241	335		43.93	135.17
100 IH	12 1/2	16 3/4	9 7/8	13 1/2		107	328	315	425	250	345		48.35	148.78
125 IH	13	17 3/8	10 3/8	14 3/8		121	373	328	437	262	357		54.99	169.19
150 L IH	14	18 1/2	11 1/4	15		157	482	361	469	285	385		71.06	218.64
150 S IH	13 7/8	18 1/8	11	14 3/4		143	440	352	460	279	374		64.86	199.58
175 IH	14 3/8	19 1/4	11 3/8	15 5/8		170	523	365	489	289	397		77.10	237.23
200 IH	15	20	11 7/8	16 1/4		194	597	382	506	305	409		88.01	270.80
300 IH	16 7/8	22 1/2	13 3/8	18 1/4		291	896	429	572	340	464		132.09	406.43
400 IH	18 1/4	24 3/8	14 1/2	19 3/4		388	1195	464	619	368	502		176.17	542.05

PART #	Dimensions: IN				Capacity: LBS		Metric-Dimensions: MM				Capacity: KG	
	TOD	HT	BOD	Wall	Al	Brass	TOD	HT	BOD	Wall	Al	Brass
<b>SALAMANDER SUPER LADLE LINERS</b>												
11 LL IH	7 1/4	8 1/4	6 1/2	3/4			184	209	165	19		
24 LL IH	8 7/8	10 3/8	7 3/4	3/4			225	263	197	19		
28 LL IH	10	10 3/4	8 3/8	1			254	273	221	25		
39 LL IH	11 1/4	11 1/2	9 3/4	1			286	292	248	25		
53 LL IH	11 7/8	12 3/4	10 1/2	1			302	324	267	25		
300 LL C/G	13	13	11 1/4				330	330	286			
350 LL C/G	13	14	11 1/4				330	356	286			
67 LL IH	13 1/4	13 1/4	11 1/4	1			337	337	286	25		
400 LL C/G	14	14 1/2	12 1/4				356	368	311			
77 LL IH	14 1/8	14 1/8	12 3/8	1 1/4			359	359	314	32		
90-S LL HW	14 1/2	14 1/2	12 1/2	1 1/4			368	368	318	32		
90-S LL	14 1/2	14 1/2	60 1/2	1 1/4			368	368	318	32		
500 LL C/G	15 1/2	15 1/2	13 3/4				394	394	349			
600 LL C/G	16	16 3/4	13 3/4				406	425	349			
167 LL IH	17 1/2	18	15 3/8	1 1/4			445	457	390	32		
207 LL IH	18	19	17	1 1/4			458	483	432	32		
1000 LL	19	19 3/4	16 3/4				483	502	425			
250 LL IH	20 3/8	19 3/4	16 3/4	1 1/4			517	501	425	32		
445 LL SG LIP	22 3/4	24 1/2	21	1 1/2			578	622	534	38		
3000 LL C/G	27	28	23 1/2	1 5/8			685	711	597	41		
684 LL IH	27	28	23 1/2	1 5/8			686	711	597	41		

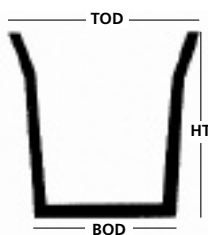
Available in bottom pour, and self-skim configuration.

SALAMANDER SUPER A SHAPES	Dimensions: IN				Capacity: LBS		Metric-Dimensions: MM				Capacity: KG	
	TOD	HT	BOD	Wall	Al	Brass	TOD	HT	BOD	Wall	Al	Brass
A 1/0	2 3/8	2 5/8	1 5/8		0.4	1.2	60	67	41		0.18	0.56
A 0.5	2 5/8	3 1/8	1 7/8		0.7	2.2	68	78	48		0.33	1.00
A 1	3 1/8	3 7/8	2 1/8		1.1	3.3	79	97	55		0.5	1.5
A 2	3 3/4	4 1/4	2 3/8		1.8	5.5	95	109	61		0.8	2.5
A 3	4 1/8	5	2 3/4		2.7	8.2	105	127	70		1.2	3.7
A 4	4 1/2	5 1/2	3		4.0	12.3	114	141	76		1.8	5.6
A 5	4 7/8	6	3 3/8		4.9	15	124	152	86		2.2	6.8
A 6	5 1/8	6 1/2	3 3/4		6.4	20	130	165	95		2.9	9.0
A 8	6 1/8	7 1/4	4 1/4		9	28	156	184	108		4.1	12.5
A 10	6 1/4	7 7/8	4 3/8		11	34	160	200	110		5.0	15.5
A 12	6 3/4	8 1/4	4 3/4		14	43	171	210	121		6.3	19.5
A 16	7 1/4	9 1/8	5 1/8		16	51	184	232	130		7.5	23.0
A 20	7 3/4	10 1/4	5 3/4		21	66	197	260	145		9.8	30.0
A 25	8 1/4	11	6 1/8		26	79	210	280	155		11.7	36.0
A 40	9 1/8	12 1/2	6 1/4				232	318	160			
A 50	9 3/4	12 3/4	7 1/8				248	324	180			
A 60	10 7/8	14 1/4	7 1/2				276	362	190			
A 70	11 1/2	14 3/4	7 7/8				292	375	200			
A 150	14 1/4	17 3/4	9 7/8				362	452	250			

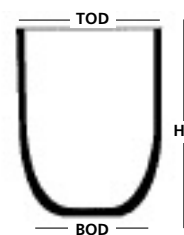
**BILGE MEASUREMENTS:**



**LADLE LINER MEASUREMENTS:**



**LADLE LINERS, A SHAPES MEASUREMENTS:**



## INSTALLING THE CRUCIBLE

Salamander Super crucibles are free standing, they should be supported fully with a suitable base block or stand, a thin layer of coke dust can be used between the crucible and base block. The crucible must be centralized in the furnace chamber or induction coil. If it is off center uneven heating will take place.

## SAFETY

Proper safety clothing must be worn at all times, refer to AFS standards. Ensure that no moisture is introduced into the melt.



## CRUCIBLE CARE



Store crucibles in a dry, warm area.



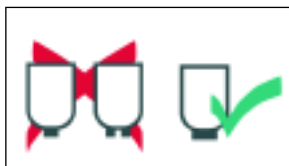
Do not stack inside another.



Do not roll crucibles.



Check for cracks or transport damage before use.



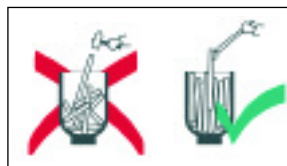
Base block must be flat, larger than crucible bottom and centered.



Tangential fire around crucible.



Do not drop charge—slowly lower in with tongs.



First charge with returns, then ingots on top.



Only add flux after metal is molten.



For lift-out, tongs must be placed on lower third of crucible. Fit tongs evenly on both sides.



Empty crucible before removing from furnace. Do not let metal solidify in crucible.



Clean carefully every day while still hot.