

FOUNDRY CRUCIBLES

CLAY GRAPHITE

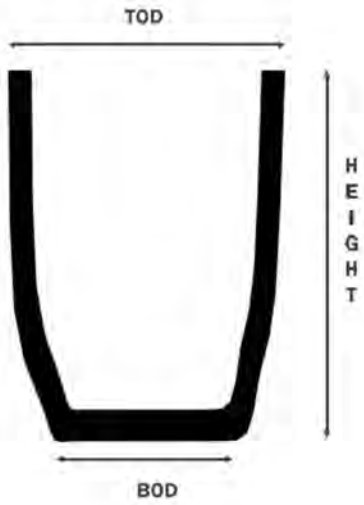
ALLIED MINERAL PRODUCTS

Global **Refractory** Solutions

Corporate Headquarters: Columbus, Ohio, USA | +1-614-876-0244 | alliedmineral.com

A-SHAPE CRUCIBLES (SMALL)

CLAY GRAPHITE



Size	Height (mm)	TOD (mm)	BOD (mm)	Brimful Capacity (L)	Brass Working Capacity (kg)
AI-1	95	92	65	0.3	2.5
AI-2	120	110	75	0.6	4.8
AI-3	135	120	80	0.8	6.0
AI-4.1	140	115	75	0.7	5.2
AI-4	155	140	100	1.4	10.6
AI-5.1	150	125	85	0.9	6.7
AI-5	165	140	100	1.5	11.5
AI-6	175	140	100	1.6	12.2
AI-8	180	155	105	2.0	15.7
AI-10	200	175	120	2.5	19.6
AI-12	210	175	120	2.7	20.8
AI-14	225	175	120	2.9	22.6
AI-15	245	175	120	3.3	25.7
AI-16	230	215	130	4.3	33.3
AI-16L	240	215	130	4.5	35.1
AI-18	255	220	140	5.0	39.3
AI-18L	280	220	140	5.6	44.0
AI-20	265	230	140	6.1	47.8
AI-25	280	230	140	6.4	50.1
AI-25L	310	230	140	6.7	52.5
AI-30	290	255	165	7.7	60.4
AI-30L	310	255	165	8.4	65.8
AI-32S	325	245	175	7.6	59.8
AI-32	340	245	175	8.1	63.7
AI-34	360	245	175	8.7	68.4
AI-35	300	268	185	9.0	70.5
AI-40	315	268	185	9.6	75.2
AI-41	330	268	185	10.2	79.6
AI-42	350	268	185	11.2	87.7
AI-42 L	375	268	185	11.2	87.7
AI-50	340	290	195	13.0	101.8
AI-55	360	290	195	13.8	108.1
AI-60	375	290	195	14.2	111.2
AI-65	395	290	195	15.5	121.6
AI-70	385	330	227	17.1	133.9
AI-80	410	330	227	18.2	142.5
AI-85	430	330	227	19.1	149.6
AI-86	450	330	227	20.3	158.7
AI-90	405	350	240	21.6	169.1
AI-100	410	350	240	22.4	175.4

Shape	Iso-pressed Graphite Crucible	Iso-pressed Carbon Bonded Crucible
A	AI	ACI
BU	BUI	BUCI
TP	TPI	TPCI
C	CYI	CCI

Note:

1) Crucible Working Capacity =
   90% of Brimful Capacity X Specific Gravity of Metal

2) Dimensions are subject to manufacturing tolerances.

3) Accessories like Bottom Stand, Muffle Rings, Top Covers are also available.

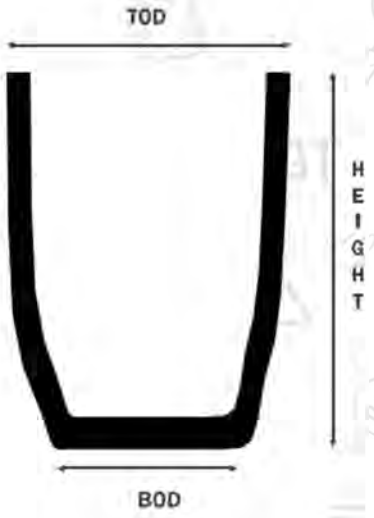
Specific Gravity of Metals:

Aluminium - 2.7
Brass - 8.35
Copper - 8.9
Gold - 19.3
Iron - 7.85
Silver - 10.5
Zinc - 7.2

A-SHAPE CRUCIBLES (LARGE)

CLAY GRAPHITE

Size	Height (mm)	TOD (mm)	BOD (mm)	Brimful Capacity (L)	Brass Working Capacity (kg)
AI-110	420	350	240	23.2	181.7
AI-120	435	350	240	24.3	190.3
AI-135T	505	394	240	27.2	213.0
AI-150T	535	394	240	29.9	233.7
AI-125	425	385	240	29.1	227.9
AI-130	450	385	240	30.7	240.4
AI-140	475	385	240	32.4	253.7
AI-150	485	385	240	32.8	256.8
AI-170	505	385	240	34.1	267.0
AI-180	520	385	240	35.0	274.1
AI-185	535	385	240	36.0	281.9
AI-195	550	385	240	37.0	289.7
AI-210	610	385	240	41.2	322.6
AI-210L	650	442	280	43.0	336.7
AI-200	510	442	280	43.0	336.7
AI-225	520	442	280	43.8	343.0
AI-230	540	442	280	45.5	356.3
AI-250	560	442	280	47.2	369.6
AI-255	615	442	280	51.8	405.6
AI-280	650	442	280	54.8	429.1
AI-300	730	442	280	61.0	477.6
AI-325	590	487	288	65.1	509.7
AI-350	630	487	288	68.0	532.4
AI-355	615	487	288	74.0	579.4
AI-361	600	545	306	84.2	659.3
AI-375	705	487	288	78.4	613.9
AI-401	660	545	306	92.6	725.1
AI-411	680	545	306	95.0	743.9
AI-451	705	545	306	98.0	767.3
AI-501	720	545	306	101.0	790.8
AI-551	760	545	306	105.0	822.2
AI-601	810	545	306	109.0	853.5
AI-611	830	545	306	112.0	877.0
AI-801	980	545	306	135.0	1057.1



Shape	Iso-pressed Graphite Crucible	Iso-pressed Carbon Bonded Crucible
A	AI	ACI
BU	BUI	BUCI
TP	TPI	TPCI
C	CYI	CCI

Note:

1) Crucible Working Capacity =
   90% of Brimful Capacity X Specific Gravity of Metal

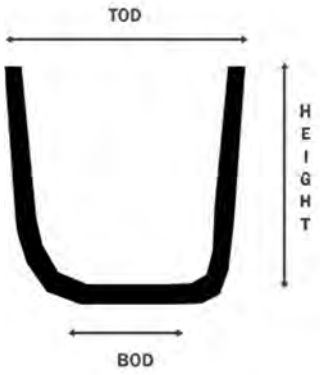
2) Dimensions are subject to manufacturing tolerances.

Specific Gravity of Metals:

Aluminium - 2.7
Brass - 8.35
Copper - 8.9
Gold - 19.3
Iron - 7.85
Silver - 10.5
Zinc - 7.2

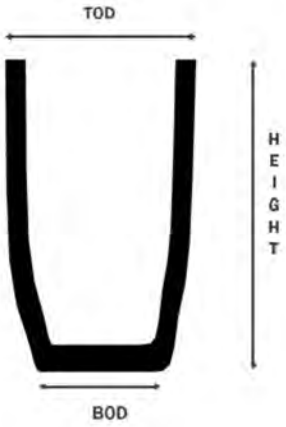
B-SHAPE, TP-SHAPE, CYI-SHAPE
CLAY GRAPHITE CRUCIBLES

B-SHAPE CRUCIBLES



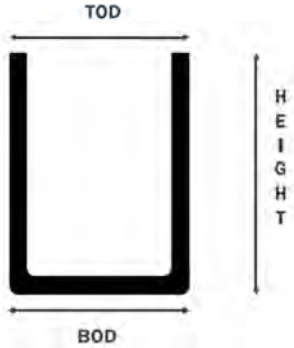
Size	Height (mm)	TOD (mm)	BOD (mm)	Brimful Capacity (L)	Brass Working Capacity (kg)
BUI-35	345	402	225	20.5	49.8
BUI-50	395	406	225	24.5	59.5
BUI-60	435	409	225	27.8	67.6
BUI-75	375	473	280	33.5	81.4
BUI-76	380	528	300	40.0	97.2
BUI-77	425	530	300	47.5	115.4
BUI-100	410	529	300	47.8	116.2
BUI-125	451	524	300	54.0	131.2
BUI-126	450	530	300	52.0	126.4
BUI-127	488	531	300	58.5	142.2
BUI-150	492	525	300	62.3	151.4
BUI-175	551	526	300	70.0	170.1
BUI-200	600	527	300	79.5	193.2

TP-SHAPE CRUCIBLES



Size	Height (mm)	TOD (mm)	BOD (mm)	Brimful Capacity (L)	Brass Working Capacity (kg)
TPI-4	613	360	250	32.0	250.6
TPI-5	707	360	250	38.0	297.5
TPI-6	807	360	250	44.0	344.5
TPI-904	914	360	250	50.7	397.0
TPI-905	920	360	250	51.0	399.3
TPI-8	820	440	290	72.5	567.7
TPI-9	880	440	290	79.2	620.1
TPI-10	940	440	290	85.5	669.5
TPI-15S	870	545	306	121.0	947.4
TPI-15	980	545	306	135.0	1057.1
TPI-15H	1050	545	306	147.0	1151.0

CYI-SHAPE CRUCIBLES



Size	Height (mm)	TOD (mm)	BOD (mm)	Brimful Capacity (L)	Brass Working Capacity (kg)
CY-110X265	265	110	110	1.5	11.7
CY-220X420	420	220	220	6.5	50.9
CY-400X500	500	400	400	41.2	322.9
CY-400X550	550	400	400	45.8	358.4
CY-400X640	640	400	400	53.9	422.2
CY-400X700	700	400	400	58.7	459.2
CYI-480X600	600	480	480	75.1	588.0
CY-490X760	760	490	490	101.3	793.2

PRE-HEATING GUIDELINES

Heating recommendations for Iso-Pressed Crucibles

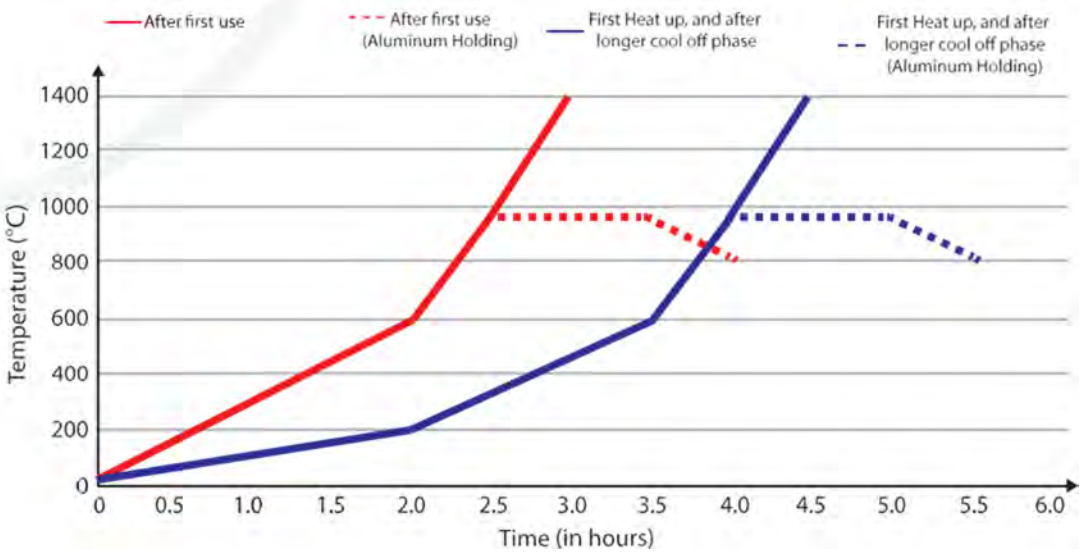
- The crucible should be heated slowly to a temperature of 200°C (390°F) over a period of two hours to remove any moisture that may be present.
- The crucible should then be heated to 600°C (1110°F) using low power.
- The desired working temperature can then be reached at full power.

Instructions for Holding (First Installation)

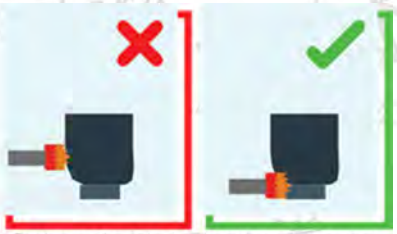
- The crucible should be slowly heated to a temperature of 200°C (390°F) over a period of 2 hours to remove any moisture that may be present.
- The temperature should be held at 950°C for approximately 1 hour to ensure melting of glaze along with anti-oxidation coating. This is necessary to maximize crucible life.
- This procedure should be done before reusing the crucible after a long time, and should be repeated at certain intervals.

Instructions for using crucibles after a long gap

- The crucible should be slowly heated to a temperature of 200°C (390°F) over a period of 2 hours to remove any moisture that may be present (Only after a long period of no use.)
- Once this temperature is reached, the heating procedure should be followed as per normal use.



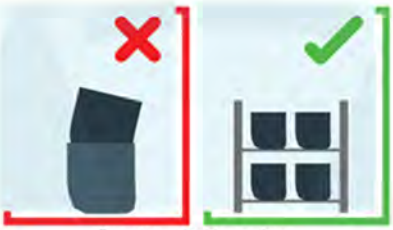
CRUCIBLE CARE



The burner should be positioned in such a way that the flame is directed between the crucible and bottom stand



Store Crucibles in a dry, warm place



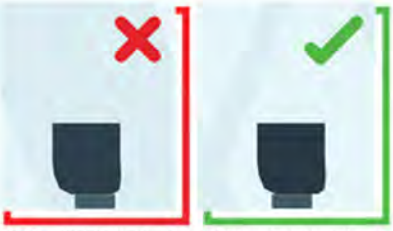
Do not nest inside another
Keep each crucible separately



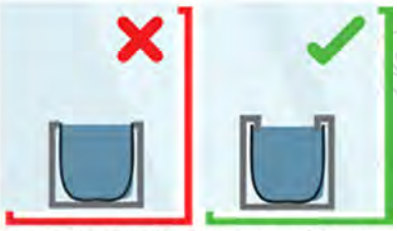
Do not roll crucibles
Move using a sack truck with padding



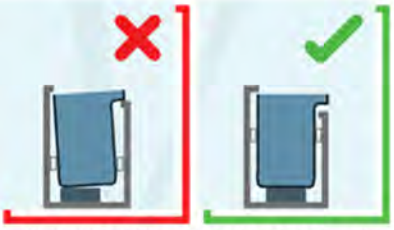
Check thoroughly for cracks or damage before use



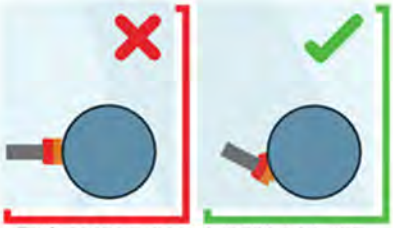
Use correct bottom stand which must be central and support the whole base



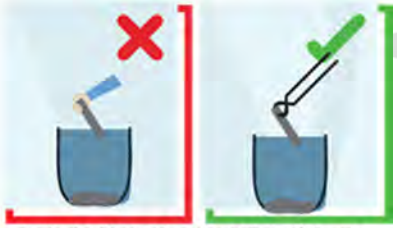
Allow space for expansion between crucible and furnace lining/cover



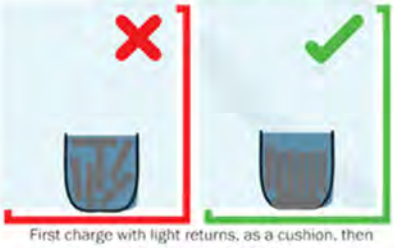
Use correct positioned grip bricks in tilting furnaces, leaving gaps for expansion
Do not hang crucible on sprout



The flame path must be tangential to the crucible



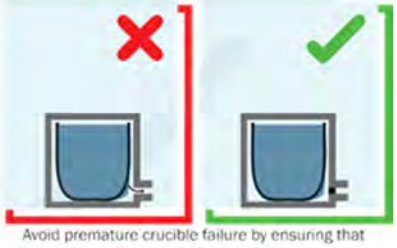
Ingots should be added to crucible carefully using tongs



First charge with light returns, as a cushion, then add the ingots vertically



Only add flux after the metal is completely molten



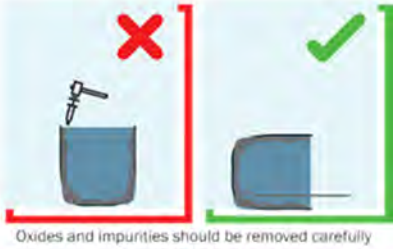
Avoid premature crucible failure by ensuring that the drain hole is sealed



Crucible should be lifted using right handling equipment with pressure on the center of crucible



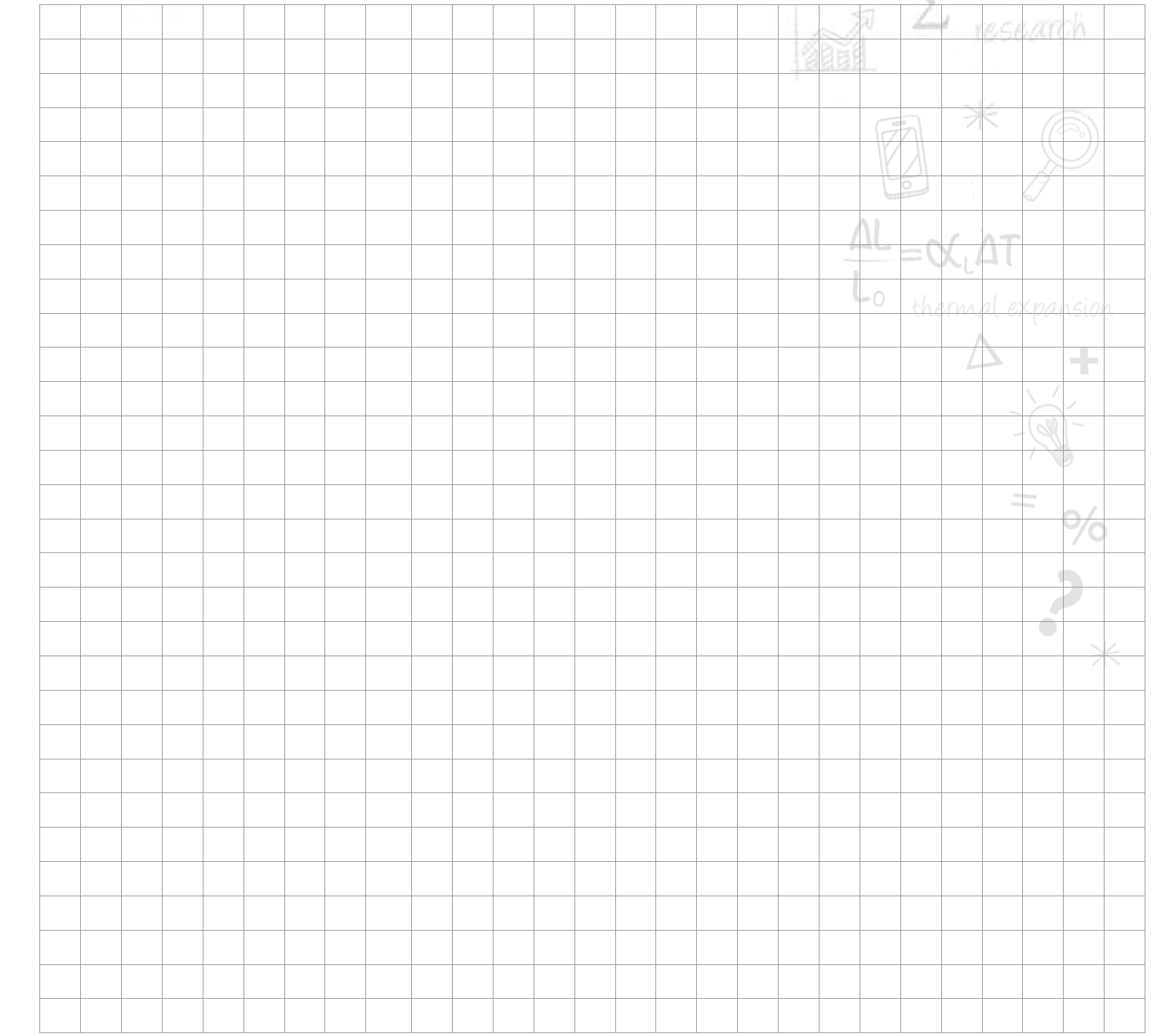
Solid metal should be removed from the crucible before next use



Oxides and impurities should be removed carefully and periodically

in our element

NOTES



The Allied Difference

Being There Worldwide with Refractory Solutions

ALLIED MINERAL PRODUCTS

Corporate Headquarters

Columbus, Ohio USA
+1 614-876-0244
info@alliedmin.com

Global **Refractory** Solutions

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