



VESUVIUS
A VESUVIUS GROUP COMPANY



MANUFACTURED
IN CHINA

Crucibles

PRODUCT CATALOGUE



Advanced Thinking in Crucibles and Foundry Products



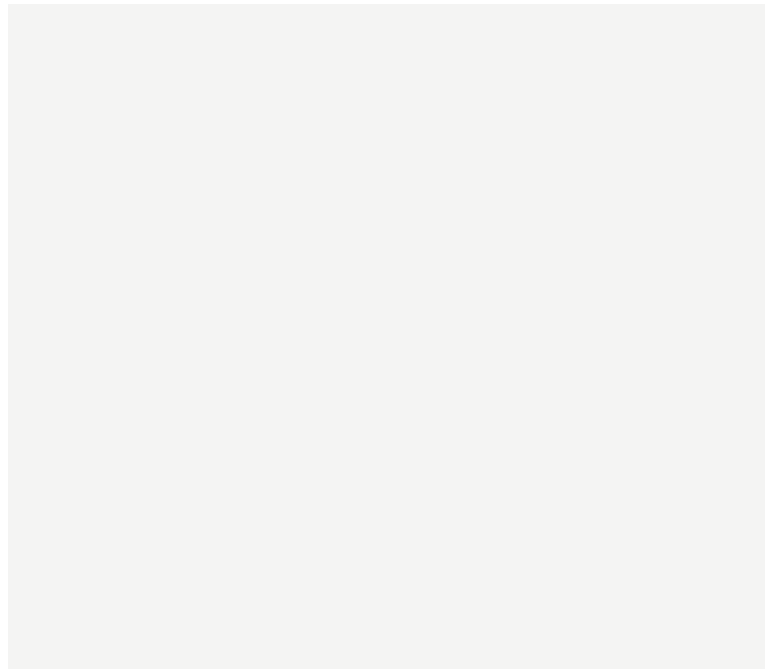


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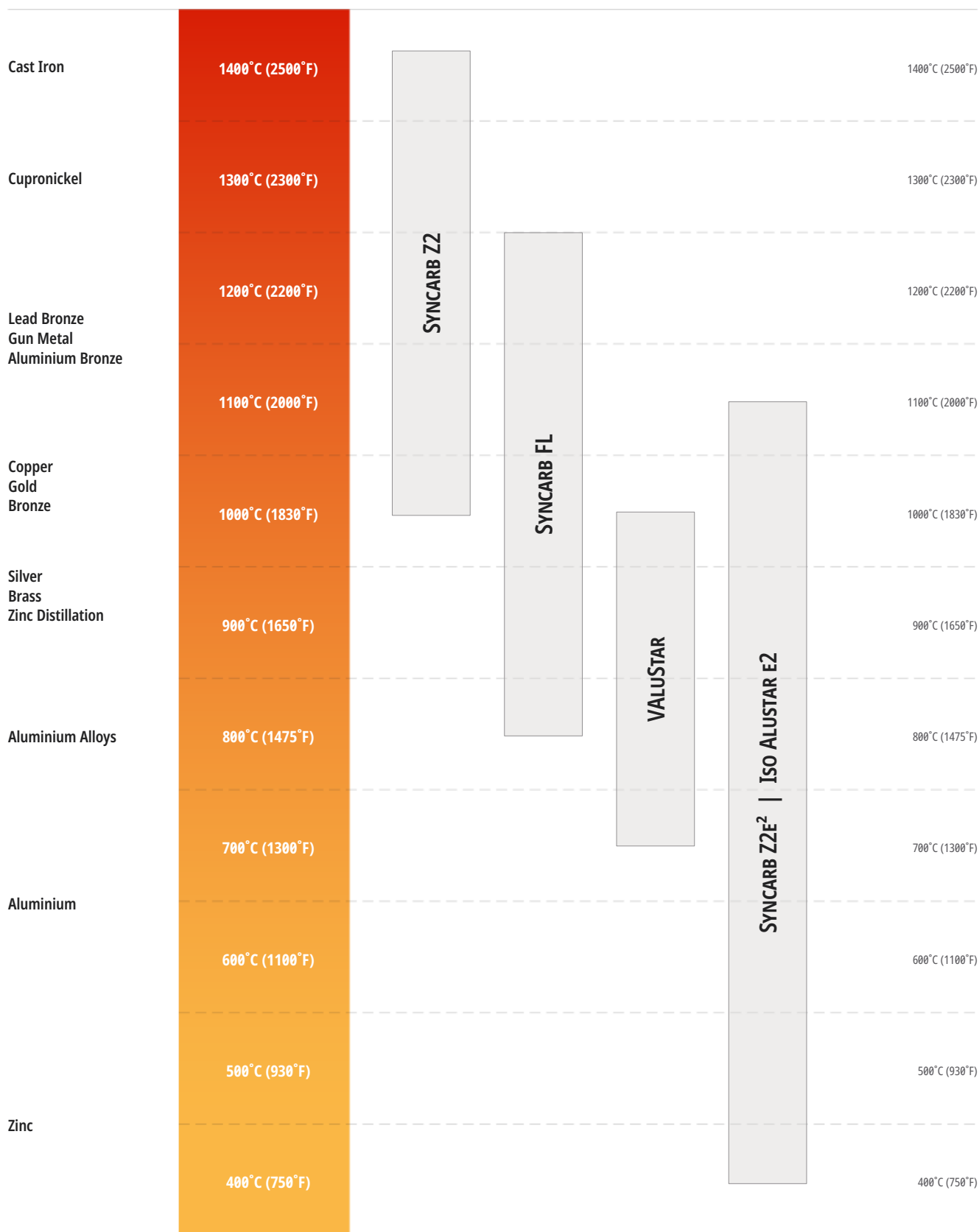
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Metal Casting Temperatures



Heating Recommendations for Clay Graphite Crucibles

SYNCARB Z2e², Iso Alustar e2, FL, Z2, VALuStar

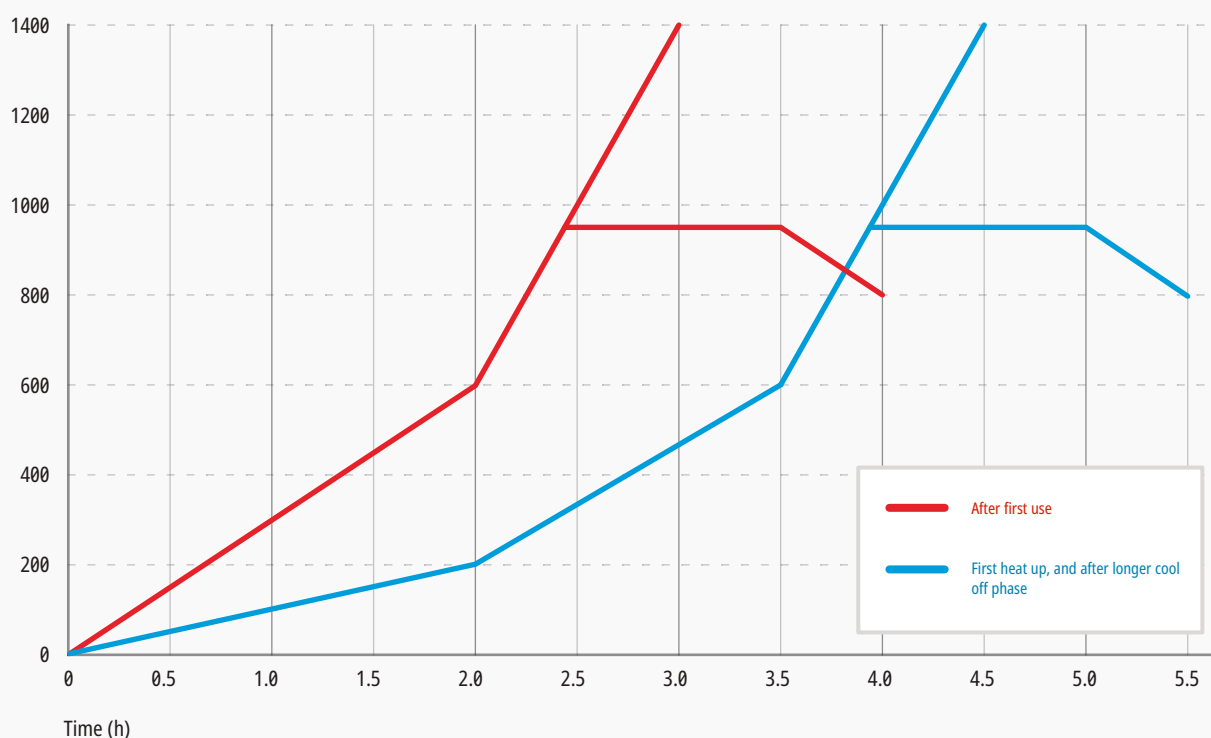
Preheating Cycle

- The crucible, after being installed in the furnace should be heated up slowly to a temperature of 200°C (392°F) over a period of 2 hours, to eliminate any moisture that may be present.
- Next, these crucibles should be heated up to a temperature of 600°C (1112°F) on low power, before the full heating rate is used to reach 950°C (1742°F).
- Clay Graphite crucibles used in a melting operation can be continuously heated up on full power until working temperature is reached. The crucible is then ready to be charged with care.
- When using Clay Graphite crucibles for holding, the temperature of 950°C (1742°F) should be reached and held for approximately 1 hour. This ensures even melting of the glaze with the additional antioxidation coating, which is essential to achieve the maximum possible crucible life..

Note

- For holding crucibles this procedure should be carried out periodically, but always before starting up again after a cool down period. This helps to compensate for the negative effects of low holding temperatures.
- Each time the crucible is heated up after a cooling down phase, it should be heated following the procedure laid down for the first installation. However, the drying time of 2 hours can be omitted. Should the Silicon Carbide or Clay Graphite crucible not be used for a long period, it will be necessary to eliminate moisture, which may have been absorbed from slag. In this case, the crucible should be heated up to a temperature of 200°C (392°F). After reaching this temperature, further heating should be continued as per the first installation.
- The above recommendations refer to the use of new crucibles in existing furnaces. When installing a new Silicon Carbide crucible into a new furnace, the heating and drying instructions of the furnace manufacturer should be followed. If the furnace manufacturer prescribes a longer heating cycle (or curve), this procedure should be carried out without the crucible. It is essential that the crucible is installed in an absolutely dry furnace.

Temperature (°C)



Crucible Troubleshooting Guide

Probable Cause

	Vertical Cracks				Lateral Cracks			Holes			Star Cracks	
	Cracks anywhere	Crack in chine and bottom	Crack from top edge	Crack in center wall	Near bottom	Half way up wall in lift out crucible	Lateral Cracks	Large holes in wall	Pin holes	Outside in pits and cavities	In base	In side wall
Crucible thin and worn causing loss of strength	×				×				×		×	
Thermal shock due to too rapid heating	×	×	×		×							
Thermal shock due to rapid cooling					×							
Top ring too tight			×									
Dross build up on inside of crucible	×	×	×	×								
Badly fitting tongs crushing crucible	×		×	×								
A bridged or wedged charge can expand and crack the crucible				×								×
Mechanical damage such as ingot dropped in (mechanical damage – possible dropped ingot or scrap)					×			×				
Mechanical damage during handling								×				
Crucible stuck to base and cracked when using tongs to free						×						
Spout touching furnace lining when initially installed							×					
Leaks from a crack									×			
Flux attack									×	×		
Damage due to excessive cleaning												×
Stand or base block too small												
Crucible not placed centrally on stand (base block)					×							
Standing hot crucible on uneven surface				×								
Badly adjusted burner												
Stand (base block) too small / crucible set too low causing flame impingement												
Thermal blanket incorrectly installed at top of crucible							×					
Badly adjusted burner with too much air												
Furnace spill door open or not airtight					×							
Inadequate preheating during start-up to activate the glaze												
Moisture in crucible not dried out properly												
Thermal blanket used between stand (base block) and crucible					×							
Using a non-conductive refractory/brick stand (base block)		×			×							
Support blocks in tilting furnace too tight			×	×								

Wear & Erosion			Oxidation				Miscellaneous			Probable Remedy
Inside at metal level	Inside all over	At the bottom and chine	Round top edge	All over crucible	Crucible base	Crucible chine	Bottom bulged up and cracked	Flaking of glaze	Spalling of crucible material	
										Monitor crucible and replace when worn out.
								×	×	Follow recommended start up procedure.
										Do not stand (base block) hot crucible on cold surface (Concrete).
										Replace top ring with correct size or adjust properly.
										Clean crucible of dross after each use.
										Replace tongs with correct size.
										Ensure that the crucible charge is loaded correctly.
										Place ingots carefully using tongs.
				×		×				Follow crucible care recommendations for handling.
										Use graphite powder on base.
										Ensure that there is clearance around the spout.
										Break up and look for crack then reassess.
×	×	×								Avoid premature and excessive flux additions.
	×									Use correct cleaning tools / clean when hot.
							×			Ensure that the correct size stand (base block) is used.
							×			Ensure that crucible is installed correctly.
							×			Rest crucible in a sand bed.
		×	×	×		×				Reset burner.
		×								Raise crucible to stop burner flame impingement.
			×							Blanket should be placed on top of crucible not down sides.
			×	×		×				Reset burner to correct mixture.
				×	×	×				Close and seal spill door.
			×	×						Follow pre-heat recommendations.
								×	×	Ensure that the crucible is stored in dry conditions.
					×					Only use graphite/cardboard between stand (base block) and crucible.
					×					Use the correct stand (base block) for the crucible material.
										Ensure that the crucible is installed correctly.

VALuStar*

VALuStar™ is the most advanced family of crucibles developed by FOSECO. It is a high density, clay bonded, iso-statically pressed crucible, which has a high graphite and SiC content to give it a superior mechanical strength.

VALuStar™ has excellent internal and external glazes, which prevent low temperature oxidation, and degradation of the crucible, that are common in aluminium and other low temperature alloys, when used over extended periods.

As a result, VALuStar™ has a significantly longer life than all other iso-statically pressed crucibles for lower temperature applications and retains its good thermal conductivity over the entire life. VALuStar™, when combined with Star coating, delivers significantly less dross adhesion and reduced impurities in holding applications.

VALuStar™ crucibles are designed to perform exceptionally well to hold aluminium and aluminium alloys in electric resistance furnaces.

Typical Metal Casting Temperature

- 700°C - 1000°C

Performance Characteristics

- Significantly longer life due to higher oxidation resistance.
- Excellent thermal conductivity and good thermal shock resistance.
- High mechanical strength.
- Good erosion resistance.



Identification

VALuStar™ crucibles are finished with a blue Low Temperature Protection (LTP) coating.

Pattern Range

VALuStar™ crucibles are available in wide range of shapes and sizes, as per our current range of crucible models i.e. A, BU, BN, TP & TBN. The crucible can also be supplied with specialised & patented coatings developed by FOSECO to enhance specific properties required in the application.

JUMBO*

Iso-Statically Pressed Clay Graphite Crucibles

Automotive aluminium die-casters are challenged today to meet the technical requirements of mega and giga casting, driven by the increasing need for underbody castings, battery housings and crossbeams, as well as the need to improve casting productivity. This has led to the continuous upsizing of holding furnace capacities to service larger casting cells.

Our JUMBO crucibles, made using the cold isostatic pressing technology, are engineered to hold up to 3 MT of molten aluminium & other low temperature alloys in holding applications. Manufactured with highly oxidation-resistant material formulations, these crucibles are designed to deliver the longest and most energy efficient service lives for die- casters.

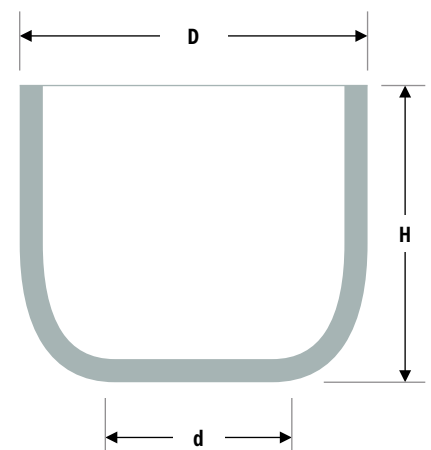
Key benefits

- **Enhanced Melt Holding Capacity** – Holds up to 3Tons of molten aluminium for uninterrupted casting in mega and giga casting cells and larger LPDC cells with multi cavity tooling.
- **Extended Service Life** – Lasts up to 12 months, reducing downtime, labour, and maintenance costs.
- **Enhanced Productivity** – Increases casting efficiency while lowering energy consumption and crucible changeouts.
- **Operating Cost Savings** – from extended service life and enhanced casting productivity.
- **Durability & Reliability** – Oxidation resistant formulations maintains mechanical strength and thermal conductivity over the long service life of the crucible.



JUMBO Crucible are available in below sizes with OD up to 1525mm and height up to 1450 mm. Contact us for customised sizes (with smaller H max)* to suit your application.

Size	B SF ISO			ZYL		
	H max mm	D mm	d mm	H mm	D mm	d mm
1190	1300	1190	700			
1525	1450	1525	700			
1525	1050	1525	700			
1450 × 1270				1450	1270	1160



SYNCARB® Z2e²

Syncarb Z2e² is a premium quality hybrid ceramic bonded clay graphite crucible with a high silicon carbide and graphite content that is manufactured through an advanced Iso-Static Pressing technology.

FOSECO uses a proprietary processing technology that results in a product with a very homogenous and high density structure. This allows the crucible to obtain superior thermal conductivity over its entire operating temperature range, high mechanical strength and erosion resistance along with good thermal shock resistance. These properties translate into a durable and robust crucible with excellent performance characteristics in lower temperature environments.

In addition, Syncarb Z2e² is also coated internally and externally by proprietary glazes to prevent low temperature oxidation and degradation that occur in aluminium and other low temperature alloys over extended period of life. These crucibles have specifically been designed by intensive research, keeping in mind energy cost saving for the customers. The special mix of materials used to manufacture these crucibles can sustain without getting oxidized for a long period of time leading to better & highly consistent performance of the crucible.

Syncarb Z2e² is designed to perform exceptionally well to melt and hold aluminium and other low temperature alloys in gas fired and electric resistance furnaces.

Typical Metal Casting Temperature

- 400°C - 1000°C

Performance Characteristics

- High thermal conductivity & very high energy efficiency
- Superior oxidation resistance
- High mechanical strength & good erosion resistance
- High consistency in performance & repeatability
- Longer life

Pattern Range

Syncarb Z2e² crucibles are available in a range of shapes and sizes to suit most end user requirements. Certain sizes can be made available with pyrometer pocket to facilitate measurement of metal temperature. A wide range of pouring lips are available.



ISO-ALUSTAR* e²

ALUSTAR e² crucible is manufactured using high-pressure cold isostatic pressing process and it shows high levels of oxidation resistance and mechanical durability.

This product range is designed to provide enhanced oxidation resistance which leads to lower energy consumption and longer crucible life.

Applications

- Aluminum melting and holding,
- Melting and holding of zinc and zinc alloys

Performance Characteristics

- Superior oxidation resistance
- High and constant thermal conductivity
- Excellent resistance to chemical attack
- High mechanical strength
- Highly consistent density

Identification

ALUSTAR e² crucibles are finished in green colour and utilize pattern coding with the suffix ALUS e² e.g. BN 500 ALUS e².

Pattern Range

ALUSTAR e² crucibles are available in a range of shapes and sizes to suit most end user requirements. Certain sizes can be made available with pyrometer pocket configuration to facilitate accurate measurement of metal temperature.

A selection of fixed pouring spouts with optimized profiles is offered where required for tilting furnace applications.



SYNCARB® Z²

The Syncarb Z² is a high-pressure, isostatically pressed clay graphite crucible that achieves optimal life when melting copper and copper alloys and in induction furnace applications. At the same time, several applications have demonstrated that the new Syncarb Z² also performs exceptionally well in zinc distillation operations, where a common mode of crucible failure is corrosive attack from the zinc vapors.

Syncarb® FL is a modified version of Syncarb® Z², which is resistant against heavy flux usage. Syncarb Z² is designed to perform exceptionally well to melt and hold copper and copper alloys in induction and fuel fired furnaces as well as in zinc distillation applications. Syncarb Z² can also be used in some precious metal melting applications

Typical Metal Casting Temperature

- 1000°C - 1400°C

Materials Advantages

Syncarb Z² crucibles use a proprietary processing technology that results in a product with a very homogenous and high-density structure. The clay-bonded Syncarb Z² crucible provides excellent chemical resistance against fluxes and excellent thermal conductivity. The inherent high mechanical strength allows the production of much larger crucibles. Other properties include outstanding oxidation resistance, high refractoriness and good thermal shock resistance.

Identification

Syncarb Z² crucibles are finished in a black color.

Pattern Range

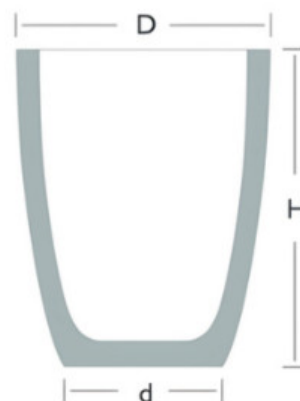
Syncarb Z² crucibles are available in a range of shapes and sizes to suit most end user requirements. Certain sizes can be made available with pyrometer pocket to facilitate measurement of metal temperature. A wide range of pouring lips are available.





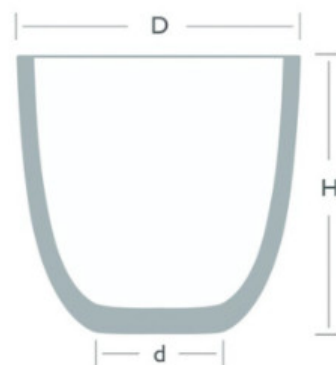
A Shape

Size A ALUS	D (mm)	d (mm)	H (mm)	Water brimful capacity (L)
465H500	470	270	500	42
465	470	270	650	56
560	470	270	750	67
655H790	470	270	790	72
500H500	545	300	500	65
500	560	300	650	90
600	560	300	680	95
800	560	300	800	116
825H1050	560	300	1050	162



BU Shape

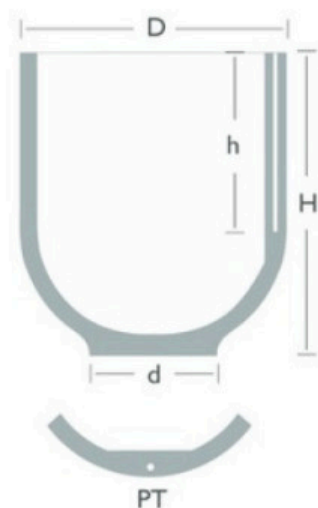
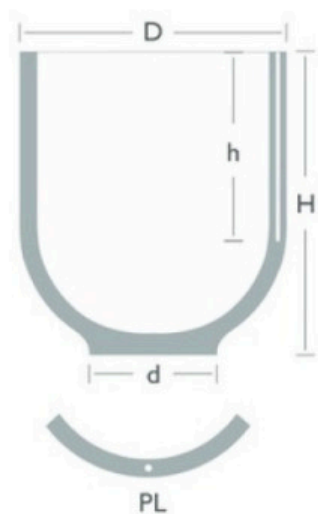
Size BU ALUS	D (mm)	d (mm)	H (mm)	PT h (mm)	Water brimful capacity (L)
100	515	305	400		47
125	520	305	450		53
150	520	305	490		58
175	527	305	550		68
200	527	305	600		76
210	615	320	500	x	77
250	615	320	630	x	101
300	615	320	700	x	111
350	615	320	800	x	152
350PT	615	320	800	465	146
360	615	320	900		175
370	615	320	1050		209
370H1200	615	320	1200		244
500	775	360	750		192
600H900	785	360	900		250
600H980	790	360	980		280
720H1100	720	380	1100		276
740H750	830	450	750		241
740H1000	838	450	1000		354
740H1280	848	450	1280		476
740H1380	850	450	1380		525
1110H750	960	340	750		330
1200	970	340	1050		504
1500H1500	985	340	1500		781
1800H615	1030	540	615	x	314
1800H830	1035	540	830	x	466
1800H1050	1045	540	1050	x	622
1800H1200	1050	540	1200	x	729
1800H1320	1050	540	1320	x	814
1800H1320PT	1050	540	1320	885	800



PT — Pyrometer-Pocket

BN Shape

Size BN_ALUS	D (mm)	d (mm)	H (mm)	PT h (mm)	Water brimful capacity (L)
150	525	230	490	x	65
175	525	230	550	x	74
200	527	230	600	x	83
204	527	230	700	x	100
205	527	230	800	x	117
205PT	527	230	800	605	113
210	615	245	500	x	87
250	615	245	630	x	118
300	615	245	700	x	134
300PT	615	245	700	465	130
350	615	245	800	x	154
350PT	615	245	800	555	150
370H700	625	245	700	x	134
370HI050	625	245	1050	x	216
370HI050PT	625	245	1050	820	214
500H430	775	312	430	x	98
500	775	310	750	x	219
600	780	310	900	x	276
600HI000	780	310	1000	x	314
600HI000PT	780	310	1000	625	310
510H750	750	300	750		188
510	750	300	910		243
510HI120	750	300	1120		315
687H480	830	285	480	x	133
687H690	830	285	690	x	225
687	830	285	900	x	318
690	830	285	1000	x	362
690PT	830	285	1000	595	358
750H650	875	350	650	x	213
750	875	350	880	x	326
800	880	350	1000	x	386
900	880	350	1100	x	435
1100	880	350	1170	x	470
1200	880	350	1250	x	510
1500	880	350	1500	x	633
1500PT	880	350	1500	1095	625
1800H700	1015	350	700		306
1800HI000	1020	350	1000		512
1800HI300	1025	350	1300		719
1800HI600	1030	350	1600		925



Product shape BN is available with or without Pyrometer-pocket / Pyrometer-hole.

Standard type pyrometer-pocket or pyrometer-hole opposite of the spout (180°).

Other dimensions on request.

PT — Pyrometer-Pocket
PL — Pyrometer-hole

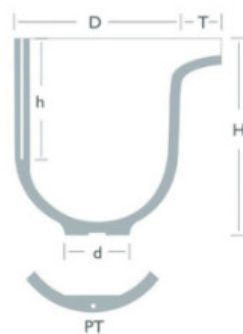
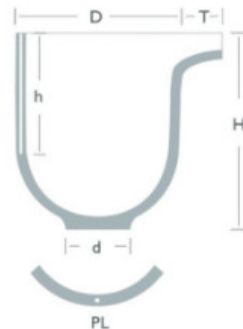
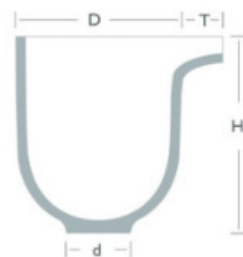
TBN Shape

Size TBN ALUS	D (mm)	d (mm)	H (mm)	T (mm)	Water brimful capacity(L)
287	525	230	600	300	69
412	615	245	800	170	133
587	780	310	900	190	229
687	830	285	900	190	270
690	830	285	1000	190	325
800	880	350	1000	180	339
900	880	350	1100	180	397
1100	880	350	1170	180	423
1200	880	350	1250	190	433

Product shape BN is available with or without Pyrometer-pocket / Pyrometer-hole

Standard type pyrometer-pocket or pyrometer-hole opposite of the spout (180°)

Other dimensions on request

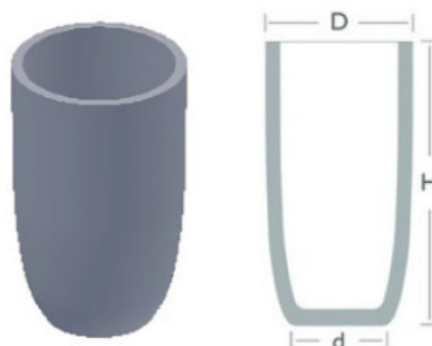


BN-shape with spout

PT — Pyrometer-pocket
PL — Pyrometer-hole

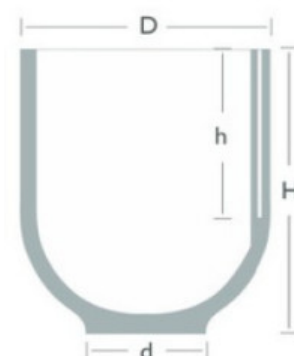
F Shape

Size F ALUS	D (mm)	d (mm)	H (mm)	Water brimful capacity (L)
107H255	330	215	255	11
107H450	330	215	450	22
107	330	215	635	32



NO Shape

Size NO ALUS	D (mm)	d (mm)	H (mm)	PT h (mm)	Water brimful capacity (L)
30430	700	305	430	x	89
30450	700	305	450	x	93
30525	700	305	525	x	115
30585	700	305	585	x	138
30597	700	305	597	x	143
30630	700	305	630	x	153
30720	705	305	660	x	162
30765	705	305	685	x	171
30810	705	305	735	x	187
30900	710	305	800	x	208
31000	715	305	875	x	232
31100	715	305	940	x	253
31100PT	715	305	940	620	249
41100	865	350	750	x	262
41200	865	350	815	x	294
41300	875	350	865	x	319
41400	880	350	915	x	344
41500	880	350	965	x	369
41600	880	350	1015	x	393
41700	880	350	1065	x	418
41900	880	350	1165	x	468
42000	885	350	1215	x	492
42240	885	350	1300	x	534
42240PT	885	350	1300	895	529



Product shape BN is available with or without Pyrometer-pocket / Pyrometer-hole.

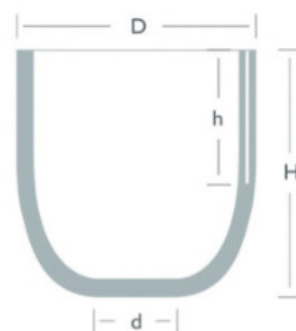
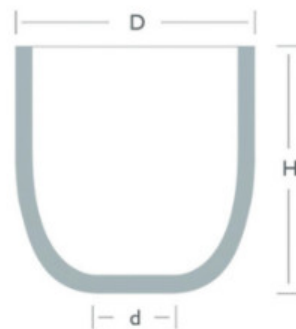
Standard type pyrometer-pocket or pyrometer-hole opposite of the spout (180°).

Other dimensions on request.

PT — Pyrometer-Pocket

NO Shape

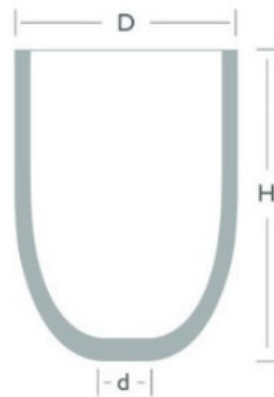
Size NO ALUS	D (mm)	d (mm)	H (mm)	PT h (mm)	PL h (mm)	Water brimful capacity (L)
52330	965	340	1015			483
53230	980	340	1320			666
60615	1030	540	615	x	x	314
60700	1030	540	700	x	x	374
60815	1035	540	815	x	x	456
60915	1040	540	915	x	x	527
60990	1040	540	990	x	x	580
61030	1045	540	1030	x	x	608
61050	1045	540	1050	x	x	622
61320	1050	540	1320	x	x	814
61320PL	1050	540	1320		885	814
61320PT	1050	540	1320	885		804



PT — Pyrometer-Pocket
PL — Pyrometer-hole

B Shape

Size B ALUS	D (mm)	d (mm)	H (mm)	Water brimful capacity (L)
650H550	650	280	550	113
650H1080	650	280	1080	201
850H600	850	350	600	164
850H850	850	350	850	279
850H1100	850	350	1100	394
850H1280	850	350	1280	477
850H1440	850	350	1440	551
1525H1000	1525	700	1000	1203
1525H1050	1525	700	1050	1280



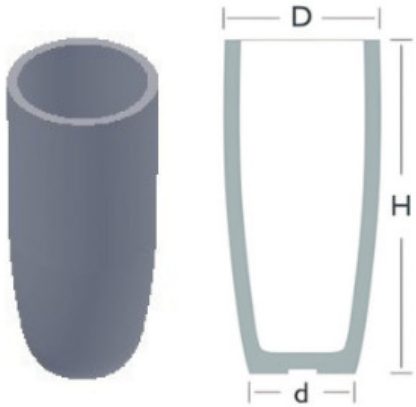
P Shape

Size P_ALUS	D (mm)	d (mm)	H (mm)	Water brimful capacity (L)
15H490	520	330	490	38
15H740	530	330	740	81
15	545	330	970	121
830	540	330	1190	159
830HW	560	330	1190	159

HW — Heavy wall

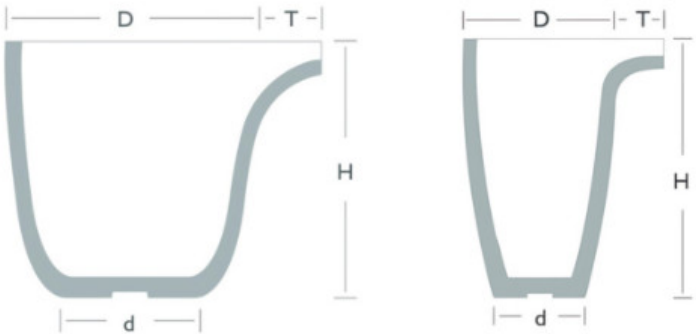
Also available with cut-out for spout

Other dimensions on request



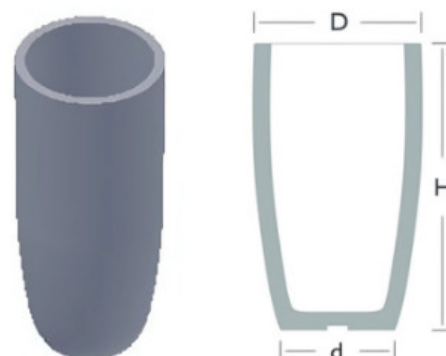
TP Shape

Size TP_ALUS	D (mm)	d (mm)	H (mm)	T (mm)	Water brimful capacity (L)
89	540	300	740	180	90
387	615	320	630	190	69
412H900	615	320	900	190	156
587	780	350	900	170	196
1500H1050	970	340	1050	430	420
1800H1300	1050	540	1300	190	647



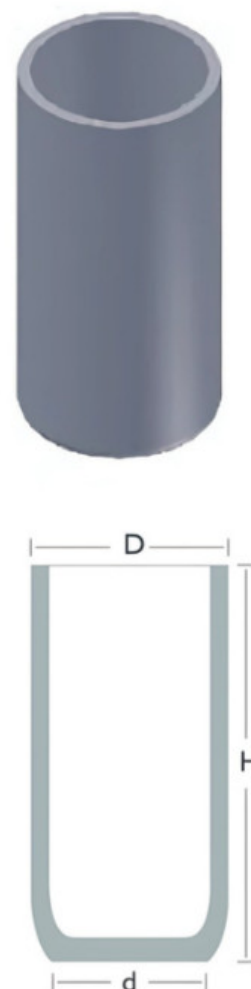
R Shape

Size R_ALUS	D (mm)	d (mm)	H (mm)	Water brimful capacity (L)
500H400	455	340	400	34
500H590	470	340	590	57
500H750	475	340	750	77
500H840	480	340	840	86
600	480	340	940	100



Cylindrical Crucibles

Size A_ALUS	D (mm)	d (mm)	H (mm)	Water brimful capacity (L)
700×330	330	328	700	41
700×345	345	345	700	41
800×390	390	380	800	54
1050×430	430	415	1050	85
1000×465	465	460	1000	112
1000×480	480	470	1000	112
815×510	510	505	815	108
1575×530	530	505	1575	225
1120×560	560	540	1120	178
1220×620	620	615	1220	248
1220×650	650	630	1220	284
1600×660	660	630	1600	378
1850×780	780	700	1850	576
1630×825	825	825	1630	600
1560×830	830	805	1560	593
1580×850	850	830	1580	627
1030×880	880	570	1030	387
2000×905	905	900	2000	947
2000×933	933	933	2000	1065
2000×940	940	940	2000	1065
2000×950	950	870	2000	994
880×970	970	735	880	464
1500×980	980	735	1500	823
2000×990	990	735	2000	1125
1050×1030	1030	800	1050	651

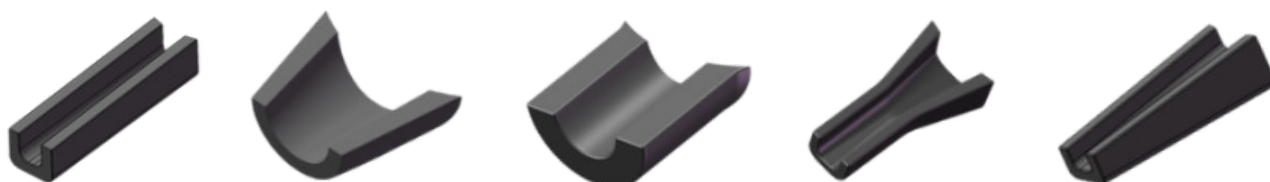
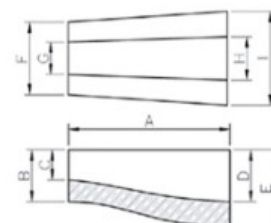


Other dimensions on request

Crucible Accessories

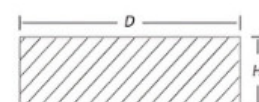
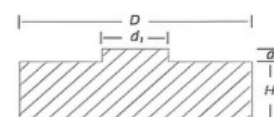
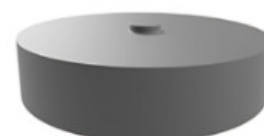
Spouts

Spout	A	B	C	D	E	F	G	H	I
LA1T	190	85	55	100	156	165	95	156	235
LA1S	200	105	70	83	126	215	145	210	320
LA3T	150	80	40	40	80	160	80	80	160
LA1K	620	125	85	100	140	160	80	80	160
LA2T	480	100	65	105	170	140	80	155	242
LA3K	460	80	50	50	135	120	60	100	160
LA4K	400	75	45	95	125	100	45	100	155
LA6K	300	80	45	45	95	110	50	50	145



Stands

	D (mm)							
H(mm)	310	340	360	380	440	550	700	750
50	x		x	x	x	x	x	x
60	x		x		x			
75	x		x	x	x	x	x	x
80	x		x					
90	x		x			x		
100	x		x	x	x	x	x	x
120	x		x	x	x	x		
150	x		x	x	x	x		
170	x	x	x	x				
200	x	x	x		x	x		
220	x		x					
250	x		x	x			x	
270	x		x	x				
300	x		x	x				
350			x			x		
492			x					



Spigot available with standard dimension 85 mm (D) x10 mm

(H) Customizable heights for all diameters Further dimensions upon request

Continuous Casting Crucible

High erosion resistance and excellent thermal conductivity

Designed and manufactured using ISO Press Technology, our FOSECO's Continuous Casting Crucibles are customized to suit your plant processes. They offer enhanced lifecycle performance and reliable heat management throughout the casting operation, delivering improved total cost of ownership through value, reliability, and consistent performance.

These isostatically pressed, carbon-bonded silicon carbide crucibles are specifically engineered for high chemical erosion environments in applications such as Bronze, Copper, Copper Alloys, and Aluminium Bronze Alloys.

The carbon content ensures excellent thermal stability, making them ideal for frequent temperature changes and high heating rates. Finished with a black oxidation protection (OBA) coating, crucibles are available in a variety of shapes and sizes to match your process requirements.



Metal casting temperatures from 1000°C -1400°C (1832°F -2552°F)



Floating crucibles are available in two sizes with 280 mm dia., can be customized



Available in sizes from 255–520 mmdiameter, height up to 1050 mm, with customizable outlets based on die and product requirements.

Features

- Advanced Iso-Press Technology ensures a uniform, high-density structure.
- Exceptional thermal shock resistance.
- Superior erosion and oxidation resistance. Tailored formulations enhance performance and maximize service life.

Operational Excellence Benefits

Extended lifecycle enables more castings with fewer changeovers. Customized solutions optimize casting quality and process efficiency.

Lower cost of ownership through energy savings, reduced maintenance, and minimal metal loss.

Shapes

CC	CC Syncarb					
Type	A mm	B mm	C mm	D mm	E × F max mm	G × H mm
A	650	255	200	200	200 × 255	Upon request
A	1050	440	360	360	380 × 440	Upon request
B	1050	440	360	360	∅ 380	Upon request
B	1050	440	360	360	∅ 440	Upon request
A	1050	520	430	430	400 × 250	Upon request
B	1050	520	430	430	∅400	Upon request

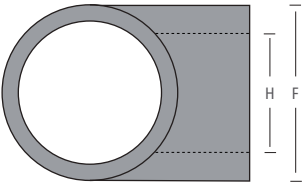
Final specification upon customer request



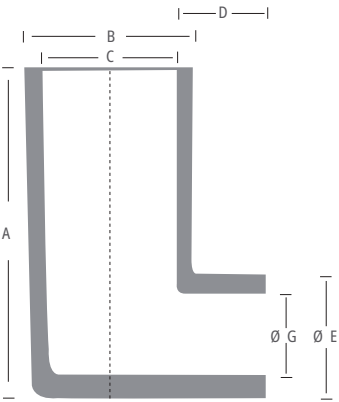
A



B



A & B



A & B

Inside Coatings

PD Coating

A high-purity, high-alumina coating sintered onto the crucible's interior during manufacturing. A dense barrier that enhances performance and extends crucible life.

Features

- Very low, almost negligible flux absorption
- Prevention of dross adhesion
- Prevention of contamination of the melt by crucible body material
- Wear resistance

Typical Applications

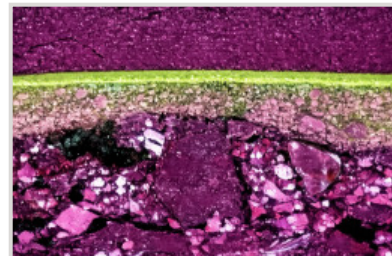
- Aluminium alloys (particularly effective at preventing attack on crucible body by aggressive modifying agents such as sodium, sodium salts, strontium)
- Zinc distillation and zinc oxide production
- Precious metal melting

Physical & Technical Properties

- Colour: **White**
- Max. application temp: **1600°C**

Note

PD Coating can be supplied on any of the carbon bonded silicon carbide or clay graphite crucibles manufactured by MMS.



Microstructure of PD coating

PRO Coating

Lower dross adhesion & lower impurities in molten metal.

Features

- High non-wettability leading to low dross adhesion
- Low impurity leak into molten metal
- Thin, low porosity, high density coat due to micro-scaled ingredients

Typical Applications

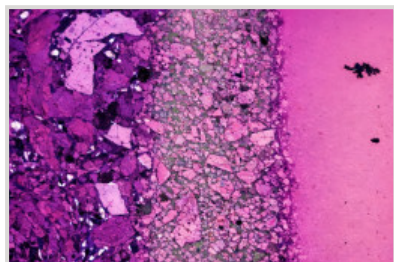
- High purity aluminium metal (99.999%)
- Aluminium alloys
- Zinc distillation
- Precious metal melting

Physical & Technical Properties

- Colour: **White**
- Max. application temp: **1600°C**

Usage Instructions

- All types of crucibles
- All types of furnaces
- Installation and pre-heating procedures of coated crucibles remain unchanged.



Microstructure of PRO coating

PURECOAT Coating

Lower dross adhesion & improved crucible performance.

Features

- Excellent non-wettability leading to low dross adhesion
- Low coating thickness
- Low porosity, high density coat due to nano-scaled ingredients

Typical Applications

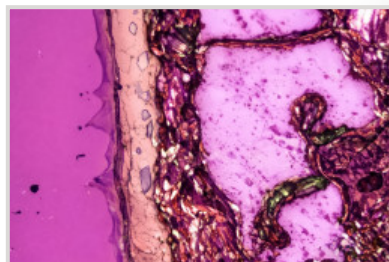
- Zinc distillation
- Aluminium alloys
- Copper melting

Physical & Technical Properties

- Colour: **White**
- Max. application temp: **1500°C**

Usage Instructions

- All types of crucibles
- All types of furnaces
- Installation and pre-heating procedures of coated crucibles remain unchanged.



Microstructure of PureCoat coating



RESCOAT Coating

Better erosion resistance & improved crucible performance.

Features

- Exceptional erosion resistance
- High non-wettability leading to low dross adhesion
- Low coating thickness
- Low porosity, high density coat due to Nanoscaled ingredients

Typical Applications

- Copper and copper alloys melting using fluxes
- Precious metal refining
- Zinc distillation

Physical & Technical Properties

- Colour: **Grey**
- Max. application temp: **1600°C**

Usage Instructions

- All types of crucibles
- All types of furnaces
- Installation and pre-heating procedures of coated crucibles remain unchanged.



Microstructure of PD coating



Crucible Handling

Storage



Store crucibles in a warm, dry place.



Do not stack crucibles, or store one crucible inside another.

Crucible inspection



Crucibles should be checked thoroughly for signs of damage before use.

Transportation



Crucibles should only be moved by sack truck with padding.

Installation



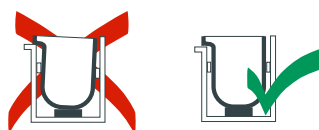
The appropriate stand must be used, and it must be positioned centrally, and aligned correctly.



Ceramic fibre blanket should be used for sealing/packing the top edge in bale-out and some tilting furnaces.



Leave a sufficient gap around the crucible to furnace cover / furnace wall.



Use correctly positioned grip bricks in tilting furnaces.



The flame direction should be tangential to the crucible.

Charging



Ingots should be placed carefully into the crucible, using tongs.



Put in returns (scrap) first, then add ingots vertically.

Melting



Only add flux after the metal is molten.

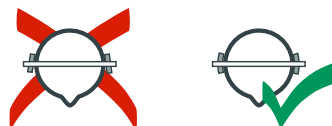


Avoid premature crucible failure by ensuring that the furnace drain hole is sealed..

Casting



Basket tongs must hold the crucible on its lower third for lifting.



Tongs must fit evenly on both sides.



The crucible must be emptied before switching off the furnace.

Cleaning



The crucible should be cleaned out by careful scraping while it is still red hot.

How to make an enquiry and place an order

When making an enquiry or placing an order for the time, please provide the following information regarding your application:

- Furnace type
- Recommended crucible size
- Heating mode of furnace (gas, oil, electrical resistance or induction heated)
- Alloy to be melted
- Furnace temperature
- Process (melting, holding, shift cycle)
- Frequency of flux treatments

Selection of the most appropriate crucible, when combined with the observance of correct practices, will help to reduce your melting costs.

Please do not hesitate to contact us for further customised products.

Vesuvius Crucible Co., Ltd

No 108, Tongsheng Road, Suzhou Industrial Park.
China 215126

Tel: 0512 62923188

info.china@foseco.com



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Tel: 0512 62923188

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