

DESCRIPTION

SYNCARB is a premium quality crucible manufactured by iso-static pressing and incorporating high levels of oxidation resistance and mechanical durability. It is designed to have superior resistance to attack by melt treatment agents typically used in aluminum alloy applications.

APPLICATIONS

SYNCARB offers superior performance for aluminum holding and melting in electric resistance and gas furnaces; as well as melting and holding of zinc and zinc alloys.

TYPICAL METAL CASTING TEMPERATURE

Aluminum: 1148°F—1652°F • 620°C—900°C

Zinc: 842°F—1022°F • 450°C—550°C

PERFORMANCE CHARACTERISTICS

- Excellent resistance to attack by chemical treatment agents
- Fast melting
- Excellent oxidation resistance
- High density
- High mechanical strength

IDENTIFICATION

SYNCARB crucibles are finished in a light rust color.

PATTERN RANGE

SYNCARB 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.

QUALITY

SYNCARB crucibles are manufactured from premium grade raw materials under an ISO 9001:2000 quality management system.



PREHEATING / FIRST USE

Crucibles should be preheated empty until they reach a bright-red color. Heat to 400°F (200°C) over two hours, then heat to 1100°F (600°C) in the next hour. Heat at full power to 1740°F (950°C). Hold at this temperature for one hour. The cover should be in place throughout the process. This procedure drives off any moisture absorbed in shipping and sets the glaze to achieve maximum oxidation resistance.

After first use, the crucible should be heated from cold to 1100°F (600°C) in 90 minutes.

CHARGING

As soon as the crucible becomes hot all over, charge and melt immediately. Charge light returns first to form a cushion for a heavier metal to follow. Use tongs to charge ingots.

Place large pieces and ingots vertically.

FULL LINE OF CRUCIBLES TO MEET EVERY APPLICATION



EXCEL, HIMELT
Roller-Formed SIC



EXCEL E
Roller-Formed SIC



INDUX
Clay Graphite



SALAMANDER SUPER
Clay Graphite



STARRBIDE
Roller-Formed SIC



ULTRAMELT
ISO-Pressed SIC



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www.morganmms.com

Dimensions: IN					Metric-Dimensions: MM			
SYNCARB 30,000 BASIN SERIES	TOD	HT	BOD	Wall	TOD	HT	BOD	Wall
30850	28 1/8	30	12	1 1/2	714	762	305	37
30900	28 1/8	31 1/2	12	1 1/2	714	800	305	37
31100	28 1/8	37	12	1 1/2	714	940	305	37

SYNCARB 40,000 BASIN SERIES	TOD	HT	BOD	Wall	TOD	HT	BOD	Wall
41200 (750MM)	34	29 1/2	13 3/4	1 3/4	865	750	350	47
41200 (815MM)	34	32 1/8	13 3/4	1 3/4	865	815	350	47
41300	34 1/2	34	13 3/4	1 3/4	865	865	350	47
41400	34 5/8	36	13 3/4	1 3/4	880	915	350	47
41500	34 5/8	38	13 3/4	1 3/4	880	965	350	47
41600	34 5/8	40	13 3/4	1 3/4	880	1015	350	47
41700	34 5/8	41 7/8	13 3/4	1 3/4	880	1065	350	47
41800	34 5/8	43 7/8	13 3/4	1 3/4	880	1115	350	47
42000	34 5/8	47 7/8	13 3/4	1 3/4	880	1215	350	47
42240	34 5/8	52	13 3/4	1 3/4	880	1321	350	47

SYNCARB 50,000 BASIN SERIES	TOD	HT	BOD	Wall	TOD	HT	BOD	Wall
52100 (686MM)	37 3/8	27	13 1/4	2	950	686	335	48
52100 (762MM)	37 1/2	30	13 1/4	2	955	762	335	48
52100 (812MM)	37 3/4	32	13 1/4	2	960	812	335	48
52100 (942MM)	38	37	13 1/4	2	966	942	335	48
52330	38 1/8	40	13 1/4	2	968	1016	335	47
52770	38 1/4	46	13 1/4	2	970	1168	335	47
53000	38 1/4	49	13 1/4	2	970	1245	335	47
53230	38 1/4	52	13 1/4	2	970	1321	335	47

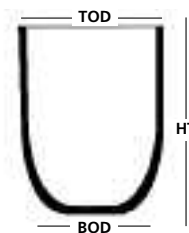
SYNCARB 60,000 BASIN SERIES	TOD	HT	BOD	Wall	TOD	HT	BOD	Wall
60578	40 1/4	22 3/4	21 1/4	2	1024	578	540	50
60705	40 1/2	27 3/4	21 1/4	2	1028	705	540	50
60762	40 1/2	30	21 1/4	2	1030	762	540	50
60813	40 3/4	32	21 1/4	2	1037	813	540	50
60990	41 1/4	39	21 1/4	2	1047	990	540	50
61050	41 1/2	39	21 1/4	2	1054	990	540	50

SYNCARB BU SERIES	Dimensions: IN				Metric-Dimensions: MM			
	TOD	HT	BOD	Wall	TOD	HT	BOD	Wall
BU 175	20 3/4	21 5/8	12	1 1/4	527	550	305	30
BU 250	24 1/4	24 3/4	12 5/8	1 1/2	615	630	320	37
BU 300	24 1/4	27 1/2	12 5/8	1 1/2	615	700	320	38
BU 350	24 1/4	31 1/2	12 5/8	1 1/2	615	800	320	38
BU 360	24 1/4	35 1/2	12 5/8	1 1/2	615	900	320	36
BU 500	30 1/2	29 1/2	14 1/8	1 1/2	775	750	360	38
BU 600	30 3/4	35 1/2	13 3/4	1 1/2	780	900	350	38
BU 700-37.5	31	37 1/2	13 3/4	2	785	952	350	48
BU 700-38.5	31	38 1/2	13 3/4	2	785	978	350	48

SYNCARB BOWLS	Dimensions: IN				Metric-Dimensions: MM			
	TOD	HT	BOD	Wall	TOD	HT	BOD	Wall
600 B	28 1/4	23	12	2	718	584	305	48
800 B	34	23 3/4	12 1/2	2	864	603	318	48
1000 B	34 3/4	28	12 1/2	2	883	711	318	48

SYNCARB SPECIAL SIZES)	Dimensions: IN				Metric-Dimensions: MM			
	TOD	HT	BOD	Wall	TOD	HT	BOD	Wall
A 300	17 3/8	21 1/4	10 1/4	1 1/4	440	540	260	33
A 600 SPECIAL	21 1/4	26 3/4	15	1 5/8	540	680	380	40
MD 13 SPECIAL	28 1/8	20 5/8	14 5/8	1 1/2	715	525	370	37
500 BN Bottom	30 1/2	29 1/2	12 1/4	1 5/8	775	750	312	40
750 BN Bottom	34 1/2	34 5/8	13 3/4	1 7/8	875	880	350	47
587 TP	30 3/4	35 3/8	13 3/4	1 5/8	780	900	350	40

MEASUREMENTS:



All SYNCARB crucibles are available with a lip. Please inquire when ordering.

INSTALLING THE CRUCIBLE

The use of a base block made of the same material will ensure uniform heating of the crucible base and help reduce thermal strains.

The base block should have the same or slightly larger diameter as the base of the crucible to provide adequate support.

For optimum heat transfer and melting efficiency, the height of the base block should be such that the base of the crucibles is level with the center line of the burner. The base block and crucible should be installed centrally in the furnace.

BALE OUT FURNACES

The crucible should have a 1/8" gap between the top edge of the crucible and the cover, to allow for expansion of the crucible. Too small of a space can lead to cracking at the top of the crucible.

Place a layer of insulating material, such as ceramic fiber between the cover and the top edge of the crucible to seal the gap. Ensure this insulation touches only the top edge of the crucible and not the side. The top steel ring must have a 1/2" space between it and the inside of the crucible to allow for expansion. Too small of a space can lead to cracking at the top of the crucible.

SAFETY

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

TILTING FURNACES

Cement the base block on the floor of the furnace; make sure it is centrally located and level.

Place the crucible centrally onto the base block. Use Morcem 900 to bond base block and crucible together.

Place the grip bricks 3" below the top edge of the crucible, leaving a 1/4" space between the crucible wall and grip bricks. Insert cardboard or carbonaceous material in the space.

Leave a space of 1-1/2" below the spout for expansion.



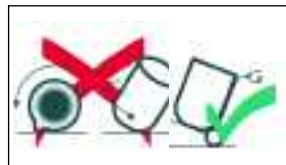
CRUCIBLE CARE



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.



Use a ceramic fiber blanket to seal. Allow space between top and sides of furnace.



Use locating bricks in tilting furnaces, to allow for expansion.



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.



Avoid premature crucible failure by ensuring drain hole is sealed.



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.



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