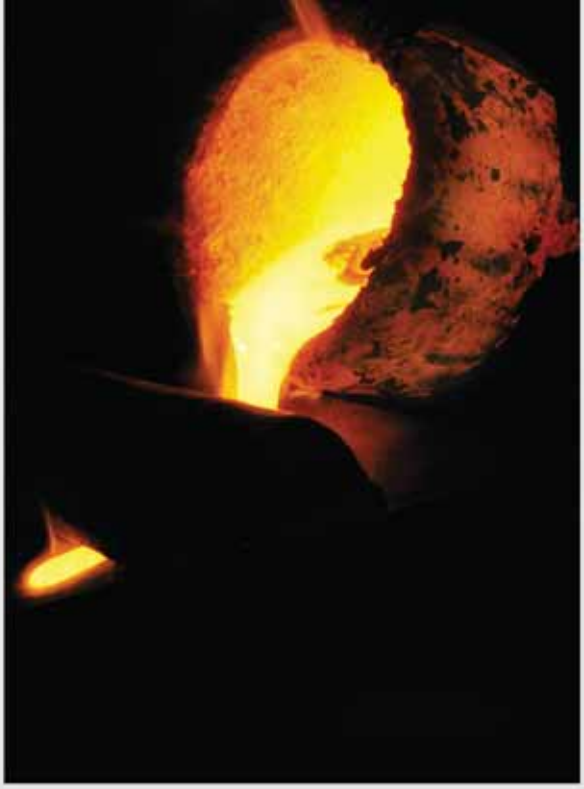
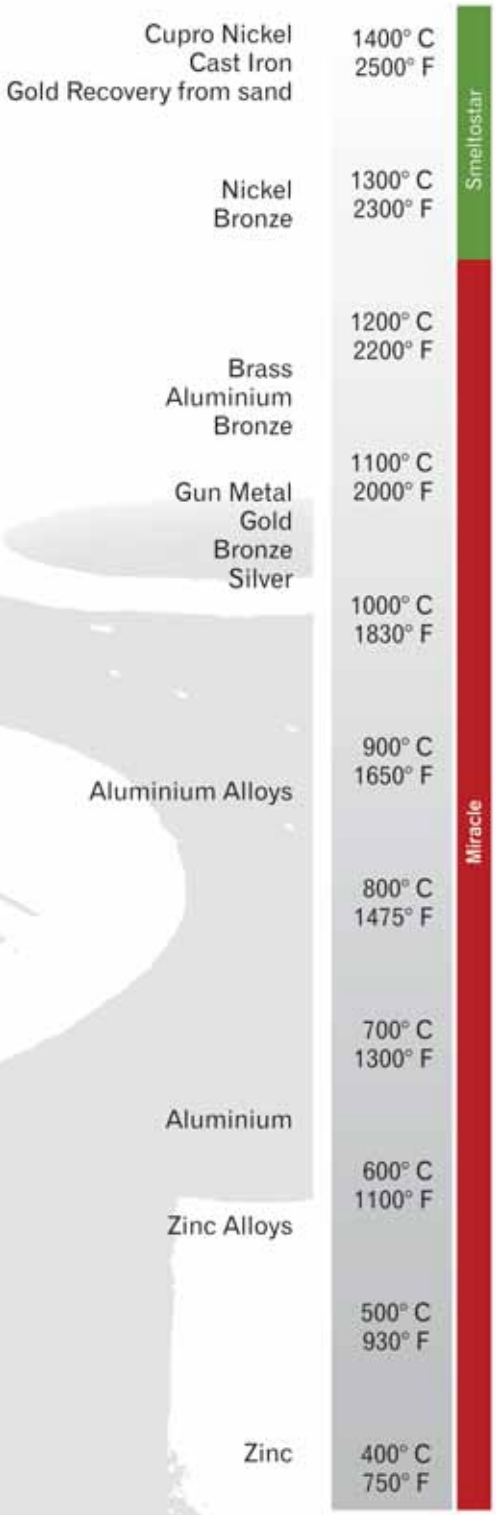


Product Catalogue

Smeltech Carbons

Smeltech Carbons

Metal Casting Temperature



About us

About us

Smeltech Carbons is situated in Odisha, Eastern India where there is a rich resource of graphite deposits.
The promoters of the company have been engaged in Graphite mining since 1936 and were the first manufacturers of Graphite and Silicon carbide crucibles in India.

Our sister concern "The Patna Estate Super Graphite Products" is engaged in manufacturing of clay graphite products since 1978 and is a market leader in supplying of clay graphite parts to specific industries such as pipe, auto and casting industries.

Smeltech Carbons started commercial production in the year 2000 and has evolved itself to becoming a strong brand in the foundry industry.

Our vision and mission

To become among the top 3 international companies in the crucible and refractory industry. This is to be achieved by capitalizing on our superior technological base and continuous research & development.

Company policy

We at Smeltech Carbons are committed to manufacture Crucibles and graphite parts of utmost quality to the satisfaction of every customer.

Company objective

Our objective shall remain always to continually improve and adapt better technological inputs for product quality enhancements through teamwork, dedication and set goals.

Smeltech Carbons

Crucibles

Crucibles

- Crucibles are subjected to harsh conditions in the melting operations and need to resist the attack of metal oxides, slags and fluxes used, hence must be erosion resistant at the temperature of specific usage.
- Hence we offer specific qualities for different temperature usages.
- Crucibles need to withstand sudden changes in temperatures from melting temperatures to ambient temperatures, hence must have a high thermal shock resistance.

Qualities of our crucibles

1. High resistance to thermal shock.
2. High erosion resistance.
3. High resistance to chemical attack / slag resistance.
4. High oxidation resistance and high conductivity.
5. Lower Melting Cost per melt.
6. Cost effective / high life of product.

1. MIRACLE silicon carbide crucibles

These crucibles are specially suited for melting of Non-Ferrous metals such as Brass, Copper, Aluminium, Gold, Silver etc., where the temperature ranges from 700°C to 1250°C.

2. SMELTOSTAR silicon carbide crucibles

These crucibles are specially suited for melting of Cast Iron, Copper based Nickel Alloys, Gold recovery from Waste sand where temperatures range from 1250°C to 1400°C.

Smeltech Carbons

Miracle
Silicon Carbide Crucibles

Description

- MIRACLE is a high quality carbon-bonded silicon carbide crucible.
- MIRACLE crucibles are made with high pressure presses and state of the art technology.
- Quality of these crucibles match up among the best in the industry.

Application

For Non Ferrous metals such as brass, copper, bronze, aluminium, silver, gold etc.,

Characteristics

1. High resistance to thermal shock.
2. High erosion resistance.
3. High resistance to chemical attack / slag resistance.
4. High oxidation resistance and high conductivity.
5. Lower melting cost.
6. Cost effective / high life of product.

Characteristics

MIRACLE crucibles are coloured RED.

Quality

- MIRACLE crucibles are manufactured with modern crucible manufacturing technology and high quality raw materials.
- Our processes are up to international standards and under the ISO 9001 : 2008 Quality Management Systems.

Smeltech Carbons

Smeltostar
Silicon Carbide Crucibles

Description

SMELTOSTAR is a high quality carbon bonded silicon carbide crucible suitable for high temperature applications.

Application

For melting of Cast Iron, Nickel Bronzes, Cupro Nickel and Gold recovery from waste sand. Suitable for temperatures 1300-1450°C.

Characteristics

1. High resistance to thermal shock.
2. High erosion resistance.
3. High resistance to chemical attack / slag resistance.
4. High oxidation resistance and high conductivity.
5. Lower melting cost.
6. Cost effective / high life of product.

Identification

SMELTOSTAR crucibles are coloured GREEN.

Quality

SMELTOSTAR crucibles are manufactured with modern crucible manufacturing technology and high quality raw materials. Our processes are up to international standards and under the ISO 9001 : 2008 Quality Management Systems.

Smeltech Carbons

Smeltcarb 900
Refractory powder & pastes

Introduction

- SMELTCARB -900 is a Carbon based Refractory Cement for use on those surfaces where a non-sticking property to molten metal is desired.
- It is also used as a jointing material for carbon materials to carbon or refractory / ceramic materials and can be used to repair carbon refractory materials which get worn out in use , to enhance the life.

Material

Carbon based refractory cement.

Supplied

in powder form.

Usage

To be mixed with water to the desired consistency and applied.

Instructions of use:

- Apply the above on the newly made refractory Mortar surface/or to be repaired surface by dampening the surface first .
- After air drying, subject the same to heating prior to use with a burner.
- The same shall be set on the surface and ready for usage.

Applications for its suitability

1. On transfer ladles inside surfaces.
2. On pouring tundish ladles inside surfaces.
3. Jointing of carbon to carbon / Carbon to ceramic materials.
4. Surfaces which are subjected to molten metal and need non-sticking properties.
5. To repair wornout parts in use subjected to molten metal flow.

Benefits and properties

The applied areas when heated prior to usage shall form a hard carbon refractory layer, which shall prevent the sticking of the metal / slag to the surface, keeping it a clean pour surface.

This shall ensure a longer life of applied part in use.

Smeltech Carbons

Super
Graphite Products

Crucible Stands | Muffle Rings | Flanged Rings

- Stands, Muffle rings and Flanged rings are made as per customer requirements.
- Stands are made to suit different sizes of crucibles and are made to withstand the crucible as per its life.
- Muffle rings & Flanged rings increase thermal efficiency for the heat treatment.
- They are made in square and round form depending on customer requirements.

Graphite Launders & Liners

SUPER graphite Launders & Liners are suitable for molten metal transfer.
Suitable to withstand very high temperatures, long life and enables smooth flow of metal without erosion.

Application

Iron & Steel, Ductile Iron & Auto industry.
Alternate consumable, maintenance free and reduces rejections during process.

Graphite Plates | Chamber Plates | Segment Plates

Graphite plates & Segments are made to suit customer requirements.
Converter segments are used in the process to convert grey iron to ductile iron based on the Georg Fischer technology.

De-slag Cups | Slag Stopper Plates

Slag stoppers are our own development item made to remove slag from molten metal.

- As we have seen slag is a undesirable material in the metal which leads to rejections in the castings, therefore we always advise our customers to use slag stoppers to remove the slag in the process.
- Apart from the items mentioned above we have more than 100 designs for specific clients / industries depending upon the metal, application, temperature of molten metal etc .

THE PATNA ESTATE SUPER GRAPHITE PRODUCTS
P.o Box 20, At Sargiguda, Titlagarh - 767033, Distt Bolangir, Odisha, India
Tel : +91-6655-220271 Mobile : +91-9437037093, +91-9437069007 Email : info@smeltechcarbons.com

Quality Certificate

ISO 9001:2008

BUREAU VERITAS
Certification

BUREAU VERITAS 1828

SMELTECH CARBONS

P.BOX. NO.: 27, SARGIGUDA, P.O.: TITLAGARH – 767 033,
DIST: BOLANGIR, ODISHA, INDIA.

Bureau Veritas Certification certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standard detailed below

Standard

ISO 9001:2008

Scope of certification

DEVELOPMENT, MANUFACTURE AND DESPATCH OF SILICON CARBIDE CRUCIBLES & ITS ACCESSORIES.

Certification cycle start date: **13 February 2013**

Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: **12 February 2016**

Original certification date: **13 February 2013**

Certificate No. **IND13.5478N** Version : 1 Revision date: **13 February 2013**

Certification Authority
R. K. SHARMA – Director

NABCB
QM 003

Local office: *"Marwah Centre" 6th Floor, Krishanlal Marwah Marg, Opp. Ansa Industrial Estate, Off Saki Vihar Road, Andheri (East), Mumbai – 400 072, India.*

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organization.
To check this certificate validity please call **+91 22 6695 6300.**

Smeltech Carbons

State-of-the-art Crucibles & Accessories

Properties
Silicon Carbide Crucibles

High resistance to thermal shock

Crucibles in use are subjected to stress by rapid temperature changes, and in extreme conditions cause premature failures.

Our careful selection of product ingredients ensures an outstanding resistance to thermal shock by rapid heat transfer.

High erosion resistance

Metals when melted are abrasive and cause erosion to the crucible.

High silicon carbide content and a high strength with hardness counters resistance to erosion.

High resistance to chemical attack/slag resistance

Alkaline fluxes for light alloys and oxidation/reducing fluxes used for copper alloys form corrosive slags which corrode the crucibles.

The careful ingredients selection impart a quality that counters corrosive attack to the crucible in use and achieve a high life.

High oxidation resistance and high conductivity

Normally exterior glazes are provided to crucibles but these are not fully protective to the crucibles in use.

Triple glaze mechanism provided in the body imparts protection throughout the use in every melt and ensures a constant melting speed.

Lower metal loss

With each melt, metal oxidises proportionally to the time taken per each melt.

Rapid melting looks after the lowering of the metal oxidation.

Cost Effective / High Life

Finally the cost of each melt is of importance.

With a good product management, a rapid melt and a high life, a low cost per melt is achieved.

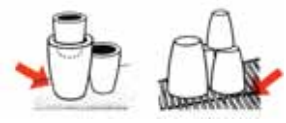
Smeltech Carbons

Care & Use

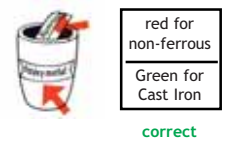
This page is a general guide to the care and usage of miracle Crucibles, such that users are guided for maximum efficiency and optimum results.

observe dry storage, pre heat before initial usage

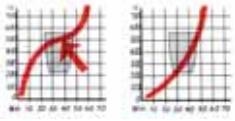
do not roll or subject to rough treatment



do not store one crucible in another, stack inverted if place is short



use the correct formulated crucible for optimum results



Delayed temp. rise at low temp. will cause harm to the ingredients of the crucible. increase temp. rapidly after dull red heat is attained

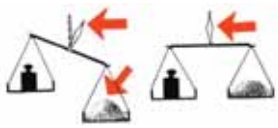
adjust flame setting correctly to avoid oil spray onto the crucible

adjust flame alignment to avoid flame to be directly onto the crucible

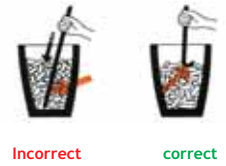
Use correct sized base preferably 10/15mm larger in dia. to the base dia. of the crucible

Place crucible correctly in the furnace to ensure overall heating and not overheating

do not add smelting ingredients before metal has liquified as these will cause harm to the crucible body

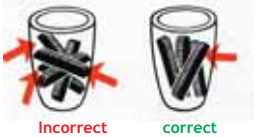


Use smelting ingredients to the desired quantity to avoid overstraining the crucible

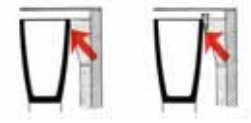


Use poking bars with a bend to avoid poking in to the metal and to the crucible

Carefully load the crucible with metal preferably placing fines/ small pieces at the base before large one are fed in the crucible



Do not jam ingots horizontally, metal expansion allowance is to be kept in mind and fed vertically



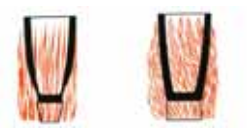
Keep an allowance for crucible expansion by placing a wooden/asbestos wedge between the crucible and rim

Do not let metal to solidify in the crucible, instead pour out all the metal left over in to small ingots to be used next day

Use correctly fitting tongs to avoid pressure on to the crucible during lift off

Lift off crucibles placing tongs at adequate depth

Unsuitable melting ingredients will corrode the crucible at metal level, use these at appropriate time and in required quantities



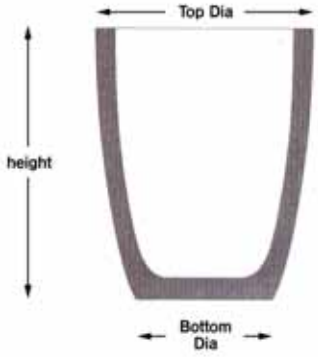
Avoid extreme draught supply and maintain correct blower pressure to permit evenly distributed heating

Smeltech Carbons

Dimensions
Silicon Carbide Crucibles

For Indian Market

Size	Height	Top dia	Bottom dia
AC 18	245	210	145
AC 20	270	228	150
AC 25	285	230	155
AC 30	280	265	180
AC 32	295	265	180
AC 35	308	268	185
AC 40	328	268	185
AC 45	338	268	185
AC 50	340	288	190
AC 60	360	290	205
AC 70	370	325	230
AC 80	390	325	230
AC 90	400	325	230
AC 100	410	355	260
AC 100M	440	325	232
AC 110	440	355	260
AC 120	450	385	260
AC 135	460	385	260
AC 150	471	385	260
AC 160	487	385	260
AC 175	480	397	280
AC 180	505	397	280



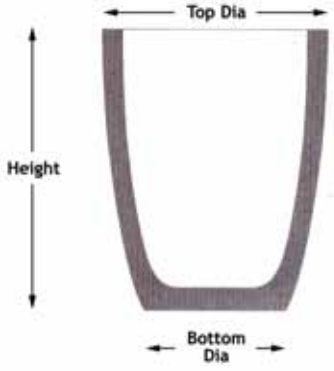
Dimensions are same for MIRACLE & SMELTOSTAR
All above dimensions are in mm (millimeters)
The dimensions shown are nominal and subject to manufacturing tolerances.

Smeltech Carbons

Dimensions
Silicon Carbide Crucibles

For Export Market (Other than India)

Size	Height	Top Dia	Bottom Dia
AC 20	245	210	145
AC 25	270	228	150
AC 30	285	230	155
AC 40	308	268	185
AC 50	330	268	185
AC 60	340	288	190
AC 70	360	290	205
AC 80	370	325	230
AC 90	390	325	230
AC 100	400	325	230
AC 120	410	355	260
AC 135	420	355	260
AC 150	450	385	260
AC 175	471	385	260
AC 200	505	397	280



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All above dimensions are in mm (millimeters)
The dimensions shown are nominal and subject to manufacturing tolerances.

Smeltech Carbons

a pioneer in
CRUCIBLE MANUFACTURING TECHNOLOGY
in India.

Smeltech Carbons

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