



CONSTRUCTION & FOUNDRIES  
CHEMICALS INDUSTRIAL CO.

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CONSTRUCTION & FOUNDRIES  
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“**EXPERT TEAM ASSURED QUALITY STREAM**”

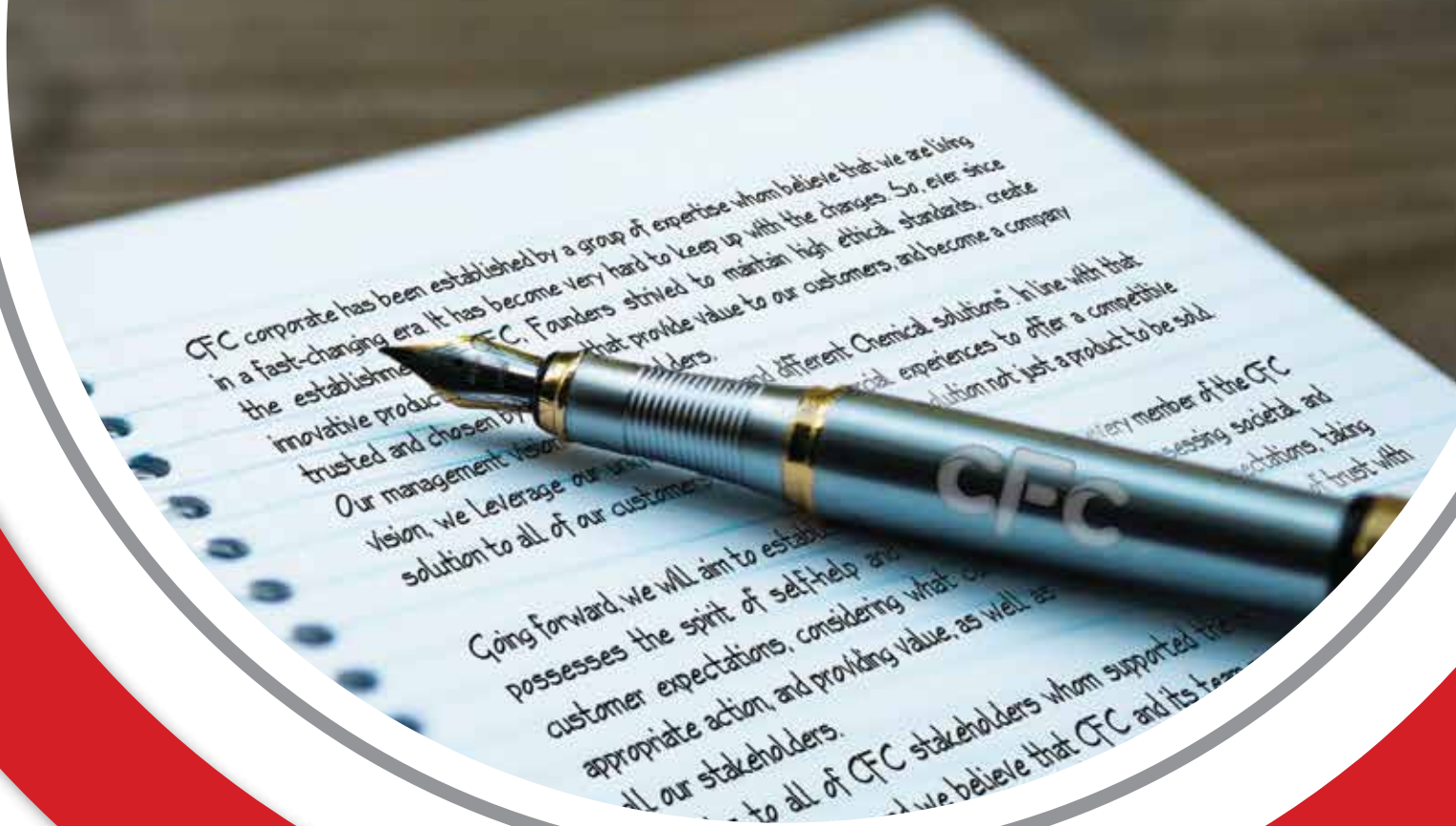
## ● Message From The Board

*CFC corporate has been established by a group of expertise whom believe that we are living in a fast-changing era. It has become very hard to keep up with the changes. So, ever since the establishment of CFC, Founders strived to maintain high ethical standards, create innovative products and services that provide value to our customers, and become a company trusted and chosen by all its stakeholders.*

*Our management vision is to provide “New and different Chemical solutions”. In line with that vision, we leverage our unique technical and commercial experiences to offer a competitive solution to all of our customers based on a value-added solution not just a product to be sold.*

*Going forward, we will aim to establish a corporate culture in which every member of the CFC possesses the spirit of self-help and takes initiative in carefully assessing societal and customer expectations, considering what can be done to meet these expectations, taking appropriate action, and providing value, as well as to build stronger relationships of trust with all our stakeholders.*

*Thanks to all of CFC stakeholders whom supported the startup and the fast growing of CFC corporate and we believe that CFC and its team members will always meet the high level of expectations from all of stakeholders.*





## ● ABOUT US

● **CFC** construction and Foundries Chemicals Egyptian company is a newly established entity, by a group of Experts enjoying more than 25 years of experience in providing full set of solutions for construction and metallurgical industries.

● **CFC** expert team along with all its long-term stakeholders had a track record for providing the optimal cost-effective solutions for all targeted customers.  
The assurance of continuous stream of service quality and sustainable success along with adopting the latest technologies in production, Research & Development and quality control are mainly attributed to the dedication, commitment and enthusiasm of CFC expert team.

● **CFC** has an extensive network and partnership with the most reputable suppliers either for the raw materials required and/or the trading products which satisfied all of customer needs along with improving customers satisfaction level.

● **CFC** enjoying more than 15 years of partnerships with reliable and reputable producers and suppliers of metallurgical raw materials and solutions which complete the product portfolio offering our customers full set of solutions.

● **CFC** had a track record for serving the international markets by providing metallurgical solution to all of its international customers located in Saudi Arabia , turkey , Palestine , Bahrian and Sudan.





## OUR MISSION

**CFC** strives to provide the most updated and innovated solutions to all its targeted customers.

Customers' needs, and level of satisfaction are considered the essential parameters in all of **CFC** commercial and financial long-term planning.

Providing cost effective and problem-solving solutions based on add a return value to our customers.

Maintain above average sustainable growth rate support meeting the targeted customer satisfaction level.

Using a state-of-the-art ERP system along with CRM module, keeping us instantly advised of all our customers' demands and complains if any.

Using the most advanced internal cost structure which support **CFC** competitive edge keeping the pricing methodology always step ahead of other competitors.

Maintain our product quality assurance structure, meeting the international standards required either for serving the local customer and/or the export markets.

Continuous learning and training of **CFC** human capital, improving their skills and customer service capabilities.

Stating fairness compensations, diversity, respect for ideas and creativity, room to grow, a healthy and creative work environment.

**CFC** considering the human capital as one of the most important resources to be invested in "Keeping employees is better for the bottom line than turnover".

## OUR VISION

" **CFC** strives to establish a culture that supports our team members, so they can provide exceptional service to our customers along-with enhancing our deep understanding of our customers' needs, wants, aspirations and every aspects of their business life which driving our success and product continuous development effectively. Utilizing more than 25 Years of managerial and technical experiences to be the market leader in metallurgical Sector and one of the fast-growing corporates serving the Egyptian construction industry "



## THE MANUFACTURING

**CFC** production plant is located in **Sadat city** an Organized industrial zone, such location supporting our capabilities to achieve our targeted cross-country customer satisfaction level.

**CFC** factory is equipped with full production lines satisfies the planned productivity level serving and meeting the forecasted planned five years sales figures for both metallurgical and construction local and export markets.

**CFC** manufacturing process is designed to easily be customizable to fit ever-changing market solutions.

The selected production systems stress the process' ability to make modifications to our product quickly and adapt to changes in the volume of goods produced.

**CFC** attempt to remain competitive by allowing small-run batches and the ability to cheaply customize their products for clients to provide a competitive advantage.

Flexibile manufacturing strategy allows **CFC** to adapt to market changes more More rapidly than other competitors .

**CFC** employ workers with multiple skill sets to assume different roles as needed and developing a process that produces a high percentage of goods that passes quality control on the first pass. By maximizing efficiency, costs will be under intensive control leading to provide our customers the most cost-effective solutions.

**CFC** manufacturing process is designed to suit our marketing strategy that requires the rapid and continual introduction of a new product.

Manufacturing planning is completely allined and coordinate with Marketing and Financial strategies which is supported **CFC** long-term competitiveness.

NEW PRODUCTS



STANDARDIZATION...IS THE NECESSARY FOUNDATION

## THE QUALITY ASSURANCE AND QUALITY CONTROL

**CFC** strategic concepts based on excellent quality System starting from the design of production processes, to setting goals and standards, to monitoring quality at every point of the manufacturing line, the holistic view assures solid production decisions when quality is at stake.

**CFC** simple production design and full understanding of the resources in hand, including labor's skill sets, equipment run information, market demand, and recognition of possible bottlenecks, are the main tools assured that the process is highly expected to be free of mistakes.

As **CFC** believes that Quality control begins with quality vendors, thanks for the 20 years of business relationship with the most Reliable vendors whom deliver the reliable raw materials that arrive on time which for sure assured stability to the production process. Moreover, Spot checking inbound material against requirements also assured quality effectiveness .

**CFC** Adhering to the quality measures set during the design of production process which will provide reliable data for analysis. As if results are communicated in real-time, this will allow adjustments to be made quickly, before errors turn into waste, low quality products, missed deadlines, and customer dissatisfaction.

## THE RESEARCH AND DEVELOPMENT

CFC expert R&D Manager who holding a master degree in chemistry and all of its team members whom enjoyed more than 20 years of experiences in developing and innovating new products along-with full correlation with marketing division, assured that CFC are capable to meet the customer needs and expectations for providing them either by meeting thier requirements and/or innovating the most cost effective solutions supporting and enhancing their productivity.

Continuous R&D keeps CFC a step ahead of competition and ready to meet the challenges of constantly cost reduction targets and changing market needs.



EXPERTISE IN INTRODUCING INNOVATIVE AND CREATIVE SOLUTIONS.  
STRIVE TO ALWAYS DOING THINGS RIGHT



# METALLURGICAL CHEMICALS DIVISION

Metallurgical division providing Foundry and steel industries the most updated and innovated solutions allow to deliver excellence at the highest possible level of operational efficiency.

CFC range of products have been specifically engineered to support the metallurgical industry in the following scopes:

Special product range for core and mould making processes, starting from sand binding systems and ended by full range of developed coating compounds containing different ingredients and their properties are tailored to our customers' needs.

For melting and casting process, a full range of product is hat been developed for treatment of ferrous molten metals either during melting and/or pouring stages, exothermic feeding systems, slag removal, anti-piping materials and heat insulation covering materials. In addition, a full product range of Fluxes has been developed either in a powder and/or granulated form, for the treatment of non-ferrous molten metals including aluminum and copper alloys.

providing our customers with full set of solutions either through CFC production lines or through the strategic alliances with the most reputable manufactures of foundries and steel plants consumable , refractories , raw materials and Ferro-alloys.



METALLURGICAL  
CHEMICALS

CORE & MOULD COATINGS -

FEEDING AIDS -

SAND BINDERS -

COVERING FLUXES -

RELEASING AGENTS



# METALLURGICAL PRODUCT RANGE



## Ferrous metal treatment

### High Performance Core and Mould Coatings

- Steel Castings.
- Cast iron (Grey and ductile cast iron).
- Centrifugal casting (pipe production).
- Dipping Coatings.
- Protective Coatings.

### High Performance Molding Materials

- Egybinder

### Feeding and surface treatment

- Egycover
- Egyfeed
- Egysalg

### Non-Ferrous metal treatment

- Fluxes solutions for treatment of Aluminum and its alloys.
- Fluxes solutions for treatment of copper and its alloys

## Release and parting agent

Cast iron

Aluminum and copper

## Trading Division

### Carbon Additives

Larpen Metallurgical Service USA

### Crucibles

Corona Cadinhos Brazil

### Refractory Solutions

Insertec Refractory solutions Spain

### Refractory ceramic products and bricks

Ceramica Del Nalon Spain

### Master Alloys

AMG Aluminum England

### Ferroalloys and Foundries raw materials

WUDU GROUP China

### Resins&New Composite Materials China

SQ group China

### Induction Furnace Manufacturing

5M Induction Turkey

## High Performance Core & Mould Coatings

To ensure full protection against veining, burn-on and metal penetration defects associated with the high casting temperatures in iron & steel foundries, a careful selection of refractory materials is crucial to insure the result of casting superior surface finish.

The range of coatings utilize high purity zirconium silicate, graphite aluminum silicate, and different metal oxide refractories to offer full protection under the most sever casting conditions.

A full range of specialist products are also available for a specific working conditions, such as the high requirements of manganese steel, highly alloyed stainless steels or metal penetration due to hot spots or high metal-static pressures.

Weight of casting is an important parameter for selecting the type of coating, as for the heavy sectioned castings, high purity zirconium silicate combined with graphitic refractory material provide optimal refractoriness which preventing metal penetration. As casting weight and thickness is reduced, alternative refractory material such as alumina silicates can be introduced to improve insulation properties and help to eliminate sand expansion defects.

The Series of **EGYCOAT** products have been specifically engineered so that they can be applied by dipping, flow coating, brushing, swabbing and spraying which classified according to each type of metal castings:

### STEEL CASTINGS

**EGYCOAT 200 ZR** and **EGYCOAT 100 ZR** Spirit and water base respectively, are Types of coatings based on precise blends of zirconium silicate and different refractory materials to ensure optimum protection of both mould and core.

A full range of specialist Coatings are also available and tailored to cover a specific application. All of theses products are formulated to ensure rheology is optimized for specific application methods.





## High Performance Core & Mould Coatings

### CAST IRON (GREY AND DUCTILE CAST IRON)

**EGYCOAT 211 GR** and **EGYCOAT 200 GR** are Spirit and water base respectively. Such Type of dark grey coatings based on Graphite - aluminum silicate and iron oxide. Such type of coatings prevents the penetration of cast iron melts and providing a clean and smooth surface finish.

### CENTRIFUGAL CASTING (PIPE PRODUCTION)

**EGYCOAT 400 GR** is a water base refractory special for sand cores of pipes hub in centrifugal casting, the core must be coated with high quality refractory product with a special suspension agent to insure a uniformly fine surface of casting.

### DIPPING COATINGS

**EGYCOAT 342** and **EGYCOAT 340** are a water and spirit base dipping coating highly recommended for automotive casting foundries, the rheological properties providing exceptional dipping characteristics, and ensuring internal surfaces are free from casting defects. Refractory filler combinations are carefully selected and controlled to apply a controlled coating layer.

**CFC** considered to be one of the specialists in producing dipping coating for Automotive castings.





## High Performance Core & Mould Coatings

### PROTECTIVE COATINGS

**EGYCOAT – 520** is a Non-toxic, solvent free epoxy resin chemical resistant coating, based on epoxy resin and amine curing agents, which withstands high degrees of chemical attack. It cures to a semi-gloss, impervious finish which is easily cleaned. When used as putty, a separate filler component is provided.

The main advantages of such solution are, Anti-corrosion steel finishes coating for interior use, provides a chemically hard wearing, easily cleaned, attractive coating and used as a protective coating in grey and ductile cast iron castings workshops, factories, dairies, kitchens, showrooms, etc....

**EGYCOAT – TX 650** is a thixotropic solvent epoxy tar mixed with a special fillers and inert materials. Such type of solution is highly recommended when a layer of corrosion protection coating is required specially for the Castings, Metal structures and pipelining. No primer is needed as a preparation layer and thus provide a cost-effective protective layer.



CASTINGS PROTECTIVE COATINGS

## High Performance Moulding Materials

### EGYBINDER

**EGYBINDER** is a range of sodium silicate binders with advanced breakdown agent recommended for moulds and cores.

### EGYSET

**EGYSET** is a range of esters enhance the strength of bonded sand, complex chemical and physical changes occur that contribute to the hardening of cores and moulds.



HIGH PERFORMANCE MOULDING MATERIALS



## Feeding and surface treatment

### EGYCOVER

**EGYCOVER** is one of CFC new innovated products, the product ingredient insured the highly refractories and insulation performance to produce an insulating powder cover and prevent heat Losses in tundish and ladle during pouring process.

### EGYFEED

**EGYFEED** is an anti-piping exothermic insulating compounds for covering and insulating iron risers for improving feeder performance and minimizes skull formation.

### EGYSALG

**EGYSALG** is a slag coagulant used for steel, ductile and grey irons, copper and nickel alloys as High temperature metals such as steel, ductile and grey irons, nickel and copper alloys give very difficult slag that is difficult to remove above 1300 C. Such slag may give rise to different casting defects as slag inclusions and surface blowholes if enters the mould cavity.





## Covering, Drossing and Exothermic Fluxes

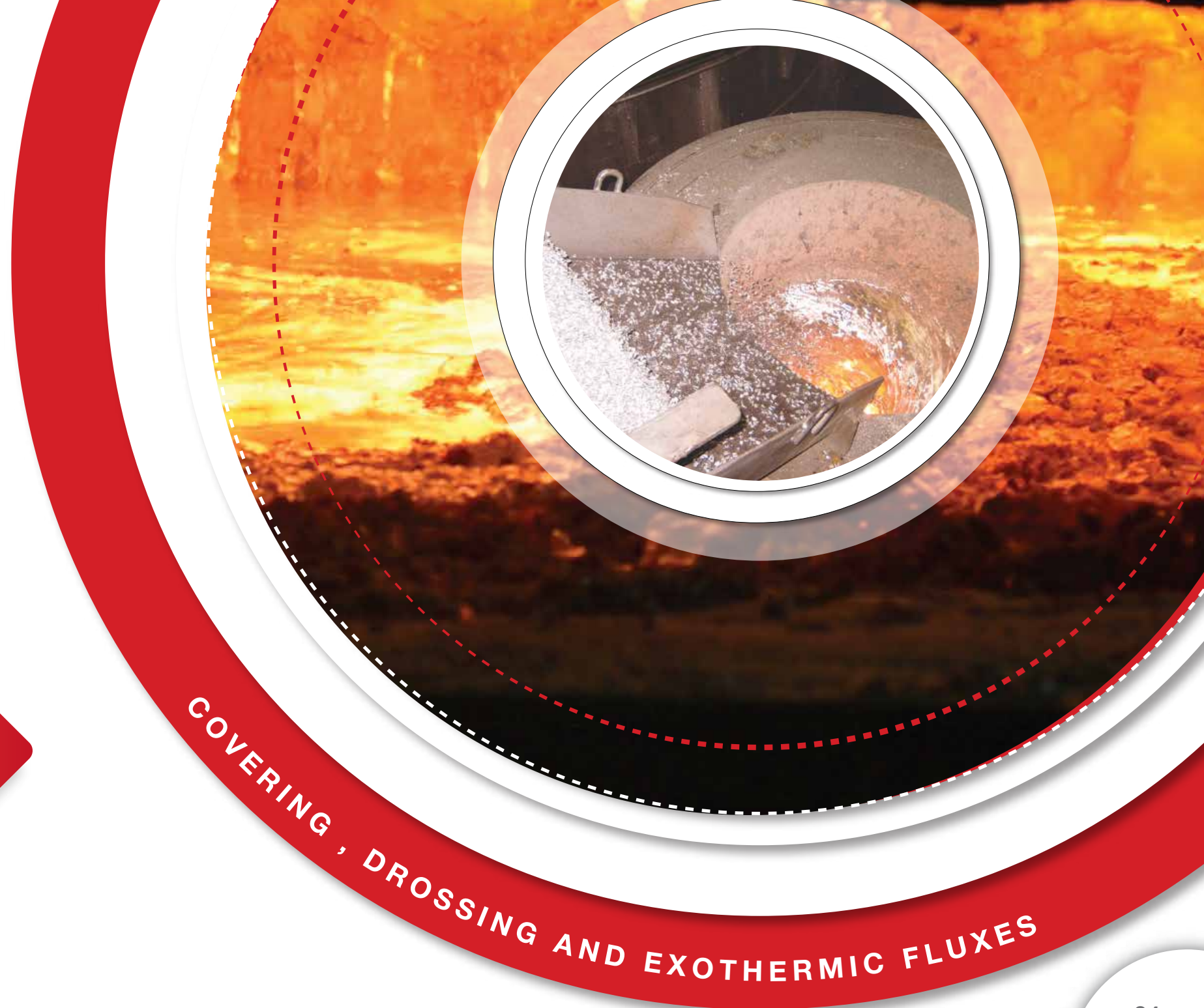
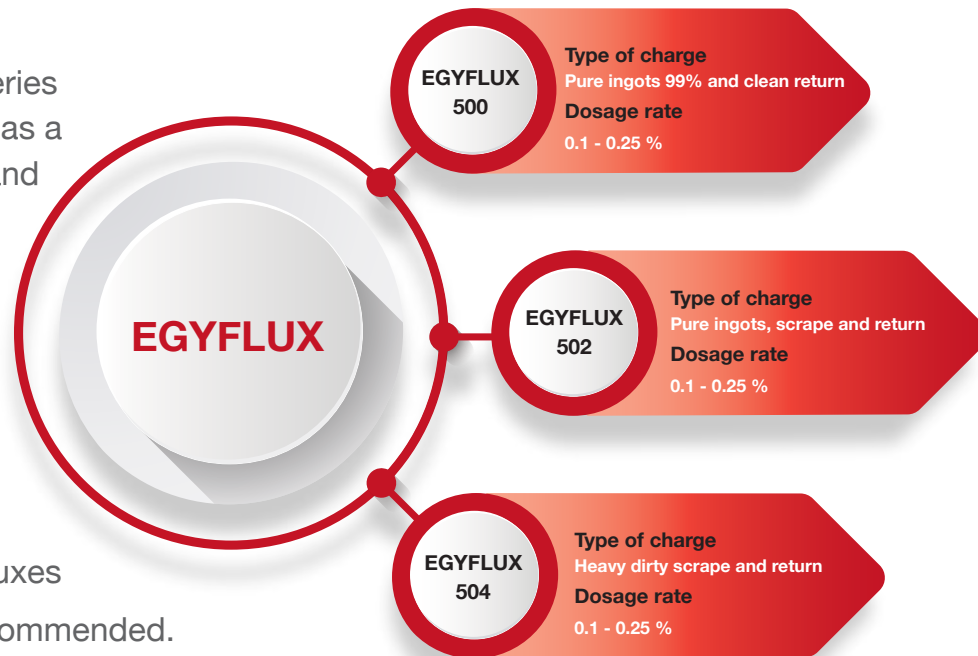
### COVERING, DROSSING AND EXOTHERMIC FLUXES

Aluminum is chemically very active. A tough film or skin of aluminum oxide forms quickly on all freshly exposed surfaces, especially in the molten state. Scrap or ingot additions to the melt, stirring and agitation cause aluminum oxide to be suspended in the melt. As if oxides are included in the casted product, this will lead to defects, so they must be removed from the melt.

Several types of Fluxes are applied to dross for the purpose of releasing metal trapped in the dross and thus reducing melting losses.

**EGYFLUX** product series has been developed as a covering, drossing and exothermic fluxes.

According to charge and scrap impurities different type of fluxes Are Recommended.



## Covering, Dressing and Exothermic Fluxes

### FLUXES FOR ALKALI REMOVALS

**EGYFLUX 645** is highly recommended for removal of alkali metals from molten metal which efficiently remove non-metallic inclusions, hydrogen, sodium, calcium and lithium from Molten aluminum and aluminum alloys.

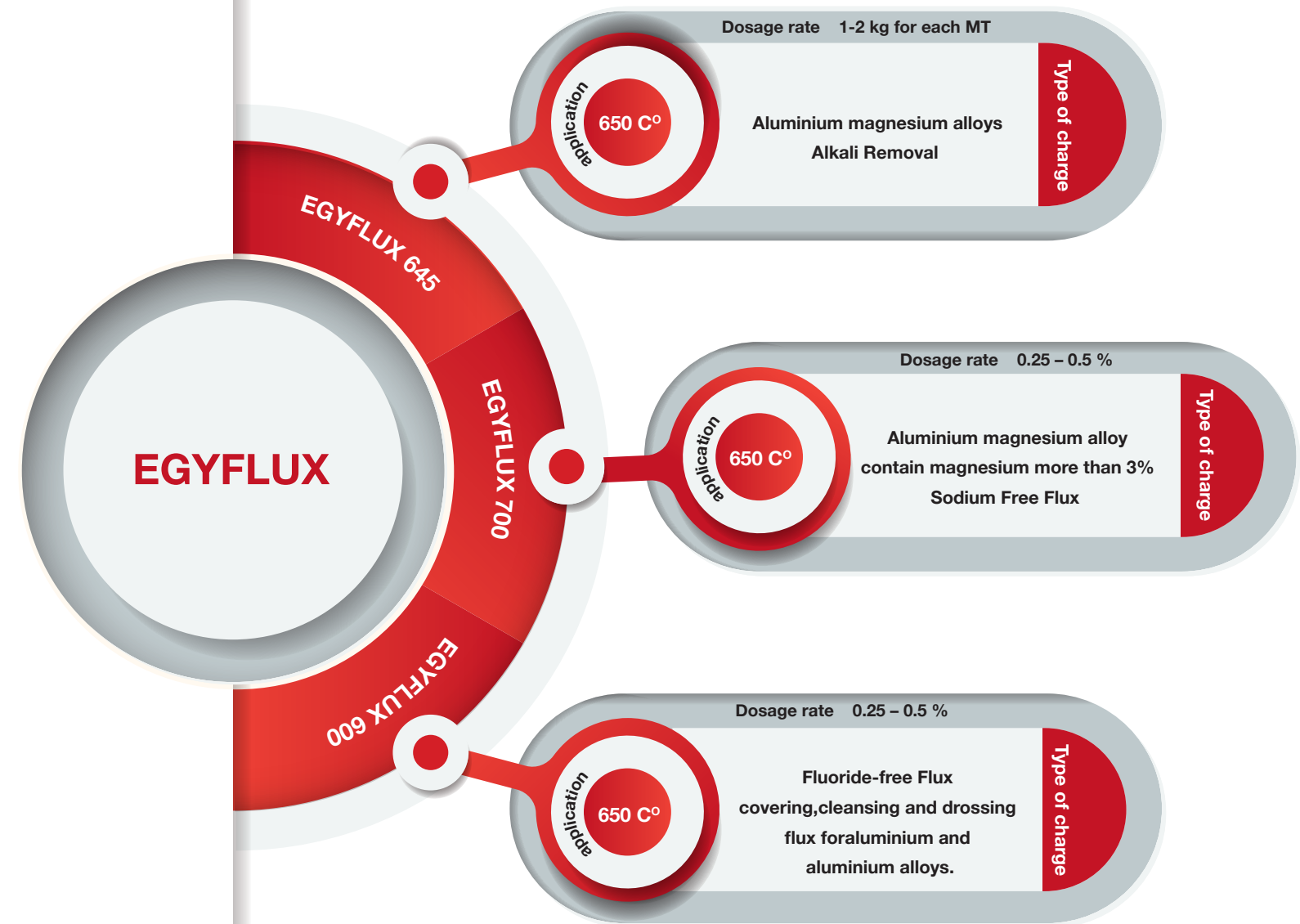
### SODIUM FREE FLUX

Most of **EGYFLUX 700** products contain sodium and sodium pick up is expected by maximum %0.001. For most aluminum alloys the sodium has no effect or is beneficial but alloys contain more than %3 magnesium may become brittle with even trace amount of sodium, so they are treated with CFC Sodium Free Fluxes.

### FLUORIDE FREE FLUXES

As the environmental pollution is extremely required to be controlled so free fluorides Fluxes is highly recommended to be used in melting process.

**EGYFLUX 600** fluoride free covering, cleansing and dressing fluxes were introduced to prevent pollution During melting process.





## Covering, Drossing and Exothermic Fluxes

### WALL CLEANING FLUX

**EGYFLUX 900** is a special solution of the problem of corundum growth on furnace Inner lining above the metal level which composed of alumina and metal which is extremely hard and difficult to remove. Such product is recommended to soften oxides built up on furnace wall, which has a very strong exothermic reaction attacks and strips oxide films.

### DE-MAGNESIUM FLUX

**EGYFLUX 100** is a Flux recommended for the removal of small Quantities of undesired magnesium from aluminum and its alloys, such flux helps to reduce the magnesium content by burning (oxidizing it from the melt).

### FLUX FOR RECLAMATION ALUMINUM FROM HOT DROSS

**EGYFLUX 950** used for reclamation of aluminum from hot dross promote separation of molten aluminum entrapped in the dross sometimes up to 80%.

### EGYFLUX 8100, EGYFLUX 8200, EGYFLUX 8300

Different types of Fluxes which is enviromental friendly products.

- All type of fluxes are covering, cleaning, exothermic and skimming for application in melting , holding furnaces and transport ladles .
- The above mentionend range improve metal cleanliness with dust free emission when treating with molten metal alloys.





# Covering, Drossing and Exothermic Fluxes

## FLUXES FOR TREATMENT OF COPPER AND ITS ALLOYS

CFC producing wide range of copper fluxes **EGYFLUX CU** used according to type of copper alloy and the applications used.

**Type of charge :** Fluxes to create an oxidizing condition to prevent hydrogen picking up.

**Type of alloys :** Recommended for commercial copper-gun metal.

**Dosage rate** 1% of molten copper

**EGYFLUX-CU 100**

**Type of charge :** Fluxes to create an oxidizing condition to prevent hydrogen picking up.

**Type of alloys :** Recommended for tin and lead bronze ( Less than %10 Bronze -lead)

**Dosage rate** 0.5 • 1% addition Rate

**EGYFLUX-CU 110**

**Type of charge :** Fluxes to create an oxidizing condition to prevent hydrogen picking up.

**Type of alloys :** Commercial copper • bronzes-gun meta l-nickel brass melted in crucible or reverberatory furnace

**Dosage rate** 1 • 2 % addition rate

**EGYFLUX-CU 120**

**EGYFLUX-CU 50**

**Type of charge :** Fluxes to protect copper alloys from oxidation and enhancing reduction conditions.

**Dosage rate :** %1 at an early stage in melting

**Type of alloys :** High conductivity copper.

**EGYFLUX-CU 300**

**Type of charge :** Fluxes to protect copper alloys from oxidation and enhancing reduction conditions

**Dosage rate :** %1 addition rate in the bottom of hot crucible and charge metal on top.

**Type of alloys :** Brass-Brazing metal - gliding metals.

**Dosage rate** 0.75 % is needed.

**EGYFLUX-CU 700**

**Type of charge :** Protect copper alloys from oxidation in electric low frequency induction.

**Type of alloys :** Commercial copper •brass •brazing metal •gliding metals.

**EGYFLUX-CU**

**Type of charge :** For treatment of copper based alloys containing aluminum.

**Dosage rate :** %1 - 0.25 by weight, preferably in more than one stag

**Type of alloys :** All copper alloys containing aluminum.

**EGYSLAG 200**

**Type of charge :** Slag coagulant for most of copper • based alloys.

**Dosage rate :** From 0.4 • 0.5 by metal weight preferably in Two stages.

**Type of alloys :** All copper based alloys

## Release and parting agent

### CAST IRON

**EGYPART** is a solution to ensure a good strip of sand on parting, it is necessary to prevent sand adhesion to pattern equipment and core boxes by coating them with oil proof medium.

This is particularly important in machine moulding.

**EGYPART 263** product is a liquid specifically formulated for this purpose.

### ALUMINUM AND COPPER

**EGYDYE**, gravity die casting is one of the operational parameters of the casting process that is often overlooked or misunderstood, Coatings are necessary for Providing a protective barrier between the die and the casting to prevent die erosion And wear; also provide some degree of control over the solidification rate and direction.

**EGYDYE 21** is a product which provides a barrier between the die and casting which helps the casting to release easily.

**EGYLUBEX** makes a layer between metallic moulds and liquid metal for Aluminum and copper alloys leads to make a good behavior of the metal during the casting process

**EGYDYE 88** provides a barrier between the runner and molten aluminum so that the casting will flow easily and prevent stuck of aluminum to runner.



# ● Trading Division

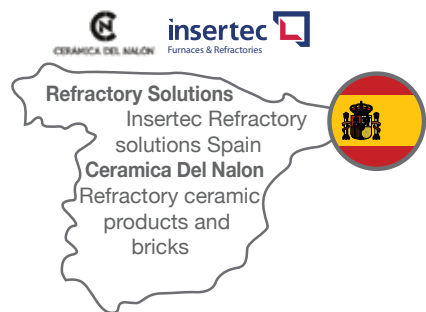
**CFC** has been established a trading division for supplying the raw materials and equipment's to all of the Egyptian foundries and steel plants.

Ever since 15 years, **CFC** had a strategic alliances and long term business partnership with the most reputable producers and suppliers of Foundries Chemicals , Ferroalloys , and raw materials.

**CFC** strives to provide all of it's customers with metallurgical solutions either produced locally or through our reliable partners world wide including Refractory solutions, Carbon Additives, Ferroalloys, Master Alloys and Foundries Consumbels



**Larpen Metallurgical Service**  
Carbon Additives Larpen  
Metallurgical Service USA



**insertec**  
CERAMICA DEL NALON Furnaces & Refractories  
Refractory Solutions  
Insertec Refractory solutions Spain  
Ceramica Del Nalon  
Refractory ceramic products and bricks



Master  
Alloys  
AMG  
England  
**AMG**



Corona Cadinhos  
Crucibles  
**corona cadinhos**



**5M**  
INDUCTION  
Induction Furnace  
Manufacturing



**WUDE GROUP**  
Ferroalloys and Foundries raw materials  
**SQ GROUP** Resins & New Composite Materials





*Thanks to all of CFC stakeholders whom supported the startup and  
the fast growing of CFC corporate and we believe that CFC and  
its team members will always meet  
the high level of stakeholders' expectations .*