



FERRUX* EXOTHERMIC TOPPING MATERIAL

EXOTHERMIC TOPPING MATERIAL DESIGNED FOR INVESTMENT CASTINGS

- + Consistent casting results
- + Uniform metallurgical quality
- + Reduced melt refining time



Exothermic Topping Materials

FERRUX exothermic topping materials produce a highly exothermic reaction that prevents the formation of a metal skin, allowing atmospheric pressure to act on the solidifying casting tree.

Once the exothermic reaction subsides, the topping provides superior insulation to the casting throughout solidification. FERRUX exothermic topping materials are applied immediately to the pouring cup when the casting cavity is filled.

Engineered with extraordinary sensitivity to quickly generate heat, FERRUX exothermic topping materials are also formulated to ensure minimal metallurgical contamination from tramp elements and carbon. FERRUX formulations are available for stainless steels and nickel and cobalt superalloy applications.

Benefits

An exothermic topping material must rapidly react to generate heat, in order to prevent the formation of a metal skin on the top of the pouring cup. Each FERRUX formulation is engineered to deliver specific thermal properties necessary for predictable feeding. Key measures, including ignition sensitivity and burn rate along with density, to ensure repeatable performance with each application. These characteristics are carefully scrutinized for each production batch adhering to the highest international quality standards.

Metallurgical consistency is paramount in delivering quality castings, especially with alloys sensitive to carbon and other tramp elements that can harm the metallurgical structure and physical properties of the castings. FERRUX exothermic hot toppings are stringently controlled to minimize carbon contribution containing less than 1% carbon by weight. For superalloy applications sensitive to a number of metallurgical contaminants, FERRUX exothermic hot toppings are also available with certified tramp element analysis to deliver superior results.

Charge make up will include a portion of riser returns which must also be free from metallurgical contaminants. The formulation design; together with stringent chemical controls of FERRUX exothermic hot topping materials, minimize contaminants thereby reducing extended refining of the melt in the furnace prior to casting.

FERRUX exothermic topping compounds are engineered to meet the challenging requirements for the investment caster.

KEY BENEFITS

- + Consistent casting results
 - Controlled thermal properties
 - Strong exothermic reaction
 - Castings open to atmospheric pressure
 - Minimal tramp elements and carbon contaminants
- + Uniform metallurgical quality
 - Low carbon content (less than 1%)
 - Certified tramp element analysis
- + Reduced melt refining time
 - Low tramp element contamination from foundry returns

Product Selection

FERRUX 107F

FERRUX 107F is a highly exothermic low carbon topping for stainless steel casting applications

- + High heat output
- + Rapid ignition
- + Good flow ability
- + Low carbon content

FERRUX CP5665

FERRUX CP5665 hot topping is a heat-generating compound applied to the top surface of open pouring cups and risers. It is suitable for application to stainless steels and superalloys

- + Unsurpassed in heat output and sensitivity
- + Controlled thermal characteristics to assure consistency
- + Contains less than 1% carbon by weight
- + Tramp elements such as lead, zinc, bismuth, and tin are closely monitored and controlled

FERRUX CP5292B

FERRUX CP5292B hot topping is high purity fast reacting exothermic topping, with certified chemical analysis, ensuring low levels of harmful tramp elements. It is designed for application to superalloys

- + Fast reacting exothermic topping
- + High heat output
- + Controlled thermal characteristics to assure consistency
- + FERRUX CP5292B contains less than 1% carbon by weight
- + Certified chemical analysis for tramp elements:

Antimony	25	ppm maximum
Bismuth	1	ppm maximum
Iron	2500	ppm maximum
Lead	25	ppm maximum
Silver	25	ppm maximum
Sulphur	400	ppm maximum
Tin	25	ppm maximum
Zinc	100	ppm maximum

KALMINEX* WKXP and WKXPG Tablets

- + Preformed exothermic/ insulating hot topping tablets
- + Available in two sizes
- + Ideal for vacuum melting casting applications
- + Low dust generation and consistent application

FEDEX* HD1 Powder Z25

- + Highly exothermic hot topping
- + Fast reaction
- + Controlled chemistry / composition

Self propagating exothermic reaction of hot topping powder



Highly exothermic reaction of FERRUX



FERRUX hot topping powders



KALMINEX tablets



Quality is assured

Higher quality and lower costs

Quality management

Foseco maintains the highest standards for quality in our products and operations. ISO 9001:2008 and ISO 14001:2004 certified facilities.

Service

Our engineers and product managers work in partnership with our customers to help them improve productivity, process control, casting quality and the working environment.



On site service



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