

## Carbon Recarburizer / Additives

Recarburizer, also known as carbon additive, carbon raiser. It is a product for increasing the carbon element (C). During the steel making process, various factors may cause the carbon content in the molten steel to decrease. This will affect the quality of the finished steel. So, steel mills usually purchase carbon reductants to cope with the decline in carbon emissions.

There are many types of recarburizers that are common. There are artificial graphite recarburizer, petroleum coke recarburizer, calcined coal recarburizer.

### 1. Synthetic Graphite Recarburizer

Graphite recarburizer is a ferroalloy product made of carbon material. Graphite carbon raisers are divided into natural graphite recarburizers and synthetic graphite recarburizers. The best quality is the synthetic graphite recarburizer. When smelting ductile iron, it is best to choose artificial graphite. The metallurgical quality of casting is better.

Type	Moisture	Ash%	V.M	F.C%	S%
Synthetic graphite	1 max	0.3 max	0.5 max	98%	0.05 max

#### Advantages

It has the characteristics of high fixed carbon content, low ash content, low sulfur content, low volatile content and less harmful impurities. It can make carbon absorption faster, absorption rate higher, no residue, and more stable carbonization effect.

The main raw material for synthetic graphite is powdered smoldering petroleum coke. The asphalt is used as a binder and a small amount of other auxiliary materials are added. After the various raw materials are combined, they are compression molded. It is then treated in a non-oxidizing atmosphere at 2500-3000 ° C for graphitization.

The synthetic graphite products are expensive. Most of them used in the foundry industry is chips, scrap electrodes and graphite blocks when manufacturing graphite electrodes. These materials can be recycled. And in the production process to play a role in heating up and increasing carbon. At the same time, it can greatly reduce production costs.

### 2. Petroleum Coke Recarburizer

Petroleum coke recarburizer is a widely used carbon riser. Its combustion temperature is 1650-1730 degrees. Therefore, many manufacturers use it as a combustion improver. It is usually replaced by coal due to its high calorific value and low volatility. The crude oil is distilled or vacuum distilled to obtain a residual oil and petroleum pitch. It is then coked to obtain the raw petroleum coke that is calcined to obtain a petroleum coke riser.

Type	Moisture	Ash%	V.M	F.C%	S%
petroleum coke	1 max	0.3 max	1 max	98.5	0.05-0.35

### 3. Calcined coal Recarburizer

Type	Moisture	Ash%	V.M	F.C%	S%
calcined coal	1 max	4-8	1 max	85-93	0.35 max

The common particle sizes are 1-3mm, 5-8mm and 3-8mm respectively. We can also supply as per the customer requirement. The carbon additives are used in various applications such as cast iron and cast steel. However, the most widely used one is the steelmaking industry.