



Mining Reagents
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BEST VALUE ADDED FLOTATION REAGENTS

ISO 9001 Certified NO. : 086911Q

GOLD LEACHING REAGENT -----FLORREA GOLDIX 567

Technical Data Sheet

(Excellent Cyanide Replacement , Environmentally friendly)

Florrea Gold Lixiviant GOLDIX 567--- Environmentally friendly Gold Leaching without cyanide.

Trade Name: Florrea Goldix 567 gold leaching reagent

Synonyms: Gold leaching reagent , Lixiviant , Leachant , Florrea GOLDIX 567 ,Excellent 100% replacement for sodium cyanide in gold leaching

Chemical Name: containing Na_2O , N , H_2O , Ca , Fe, $\text{Na}_4\text{Fe}(\text{CN})_6 \cdot 10\text{H}_2\text{O}$, NH_4

HS Code: 3824.909990

Strength compared with sodium cyanide: low toxicity, little environmental pollution, reliable performance, wide application, high leaching rate, quicker recycling, less dosage, lower cost, easy to use

Usage: 80% of the gold leaching in the world is done by sodium cyanide. Florrea Goldix 567 can replace cyanide completely. It is widely used as leachante in gold and silver mines for Gold and silver leaching to replace toxic cyanide for heap leaching, dump leaching, carbon leaching, CIP Leaching(carbon-in-pulp process) of gold-bearing oxidized ore in gold and silver mines.

GOLDIX 567 is an excellent replacement for sodium cyanide, potassium cyanide, calcium cyanide in gold leaching process.

Product Performance : similar to cyanide salt

Physical Characteristics: Florrea GOLDIX 567 is in solid lump form or pellet form with almost no odour.

Soluble in water . It is a high-tech environmentally friendly chemicals or new leachant
It can be used directly by dissolving with clean water or warm water.

In the production of gold mining industry, the product has many advantages such as simple operation (similar to the conventional cyanidation), high leaching rate, short leaching time, low toxicity and environmental protection, convenient transportation and storage .

● **Newly Developed Products**

Florrea GOLDIX 567 is one of our significant scientific achievements(invention patent) invented by our experts and related scientific research institute.

● **High recovery rate**

Florrea GOLDIX 567 can effectively leach the gold ionized atom, increase gold recovery rate with high leaching rate . Suitable for large scale production

● **High Leaching rate & Shorter leaching time**

It can leach gold ions effectively, and enjoys high leaching rate and quicker leaching speed than sodium cyanide.

● **High Recycling Rate**

The cycling manufacturing enjoys shorter period, and its production cycle (heap filtering) is about 25% shorter than sodium cyanide.

- **Stable Performance**

With addition of effective stabilizer, it can reduce the disturbance caused by S and Sb and other hazardous elements .

- **Less Dosage**

Goldix 567 is produced with imported raw materials and performed stably, with less dosage than similar products

- **Less cost of risk management and transportation**

It tremendously helps the mining company reducing various costs of purchasing ,transportation, storage, safety procedure ,environmentally friendly facilities and risk management, furthermore it enhances the relationship with local community.

- **Low-toxicity and environmently-friendly**

Goldix 567 is certified as general cargo by distinguished authority.

It can greatly appease the contamination and hazard of poisoning caused during the production by using Goldix 567 instead of sodium cyanide.

The results of toxicity test taken by China Centre for Disease Control and Prevention shows that the acute oral test LD₅₀ is 50.1mg/kgBW, less than that of caustic soda (whose LD₅₀ is 40mg/kgBW) .

The ore tailings is tested to meet the requirements of environment protection.

- **Convenient to use**

The Leaching circuit and application method is same as that with sodium cyanide, and rather easy to use .

GOLDIX 567 is compatible with sodium cyanide extracting process.

The pregnant solution and barren one can be reused.

- **Much easier for sea ,air, railway and inland transportation**

Goldix 567 is certified as general cargo by distinguished authority.

It can be shipped easily and with less cost and less procedure and documents.

Guide of Application

- It is recommended that a proof test suitable for its specific leaching conditions is done before using GOLDIX 567.

- **Flow sheet of Application**

Goldix 567 is used in the same metallurgy procedure as that of traditional gold cyanidation.

Ore---crushing---heaping---leaching---sorption using active carbon---resolution & electro analysis
---smelting---alloy gold

- **Comminution**

Ore crushing shall be done in accordance with ore grade and ore properties.

- **Dissolving of Goldix 567**

GOLDIX 567 is in solid lump or powder form. If necessary, secondary crush can be conducted on it in order to have a better and complete dissolve by water or warm water (about 6 - 8h).

- **Alkalinity control and adjusting**

- GOLDIX 567 is an alkaline mixture (PH=11.6). Adjust pH value of back water 11±1. When pH is below 10, please use lime (CaO₂) or caustic soda(NaOH) (try not use NaOH if possible) to adjust as a stabilizer . Before GOLDIX 567 is used, PH value shall be adjusted and maintained as per ore properties. It is proved that PH value of 11.14 can have the best leaching performance. If pH is over 12,it is possible that active carbon have some difficulty in collecting the gold though the leading is not affected.

Keep a regular detection on the aqueous solution alkalinity and solution concentration. If necessary, adjust alkalinity and solution concentration in time and frequently.

● Reagent Concentration

It is recommended to prepare GOLDIX solution at the concentration from 3% to 11% as per ore properties and gold grade.

When the backwater pH is adjusted to standard, calculate the volume of water and then Calculate how much gold leaching reagent should be used. That is to say, put in Goldix 567 environmental friendly gold extracting reagent in the proportion of one kilogram to 4 kilogram of Goldix 567 for each cubic meter of water.

The reagent concentration should be tested in line with the method provided by the company.

Due to the different ore characteristics and pH values, the optimum reagent concentration should be determined according to the actual ore reserve and experiment on the ore sample. The gold processing reagent Goldix 567 should be put in accordance with the proportion.

Dank woven bags, gunny bags or drug frames can be used to hold water and continuously pour and dissolve the reagent pond (barren liquor pond) or pump into the reagent tank and make it vibrating and stirring from time to time until the reagent has completely dissolved. If heap leaching processing is conducted, reagent addition and spraying can be done simultaneously.

Dosage

After backwater PH value is adjusted to the standard 10-12, measure the water volume in the water tank, and make up dosage and add Goldix 567 around 0.01~0.03% based on the ore weight (100~300 gram Goldix 567/per ton ore). The dosage is changeable with the pH value of the ore and ore characteristics.

NOTE

- It is recommended to use activated carbon instead of zinc wire or ion exchange resins to remove gold from solution.
- Please use Lime instead of caustic soda as pH regulator.
- Regular detections shall be made to determine Au content in the mineralizing solution and adsorption effects of activated carbon.
- During the process of leaching, Goldix 567 has no repulsive effect on gold cyanidation or it is compatible with sodium cyanide extracting process.

Temperature Influence

Ambient temperature has a certain influence in the leaching speed and leaching rate, so it is recommended to use the product when the ambient temperature is above 10 °C.

Transport and Storage

The product is non-ignitable, non-explosive, non- hazard of oxidant, zero radioactivity, no other transport hazard; preferable to transport by highway, railway, ocean shipping and air.

As the product is vulnerable to moisture absorption, measures shall be made to prevent moisture, damp and water; it shall be sealed tightly and stored in a cool and dry place.

The product shall be insulated for storage; mixed loading with acid chemicals and edible items is strictly prohibited. Prevent human and domestic animals from swallowing.

Regulations on safety in production shall be formulated and improved in accordance with relevant provisions of the state.

- Packing:** 1) 25kg net PP woven bag lined with polyethylene bag
2) 1000kg net IBC bag

Quantity: 20mts/20'FCL

