



Danafloat™ 068 mineral collector

Application

Danafloat 068 offers good selectivity against pyrite in sulfide flotation and can provide good to excellent flotation response to various copper minerals, including but not exclusively, chalcopyrite, bornite, chalcocite and covellite. Other applications are in the flotation of galena and copper activated sphalerite, tetrahedrite and gold ores.

The product can be used in conjunction with xanthate or as a replacement and, depending on mineralogies and flotation circuit conditions, this product may be stronger than xanthate in which case the dosage will be lower than xanthate. *Danafloat 068* has frothing capabilities so often frother dosages are reduced when switching to this product.

Danafloat 068 can be fed to the circuit either undiluted or as a solution. Before deciding to dilute the product, because water chemistry can have an impact, stability tests at the solution concentration desired are highly recommended.

Danafloat 068 is used in neutral to alkaline conditions (> 6 pH). Typical dosage levels depend on ore feed grades, mineralogies and flotation responses, but typical dosage levels range between 10 to 50 grams per metric ton ore (0.020 to 0.11 lb/T).

Composition

Chemical name:	Na di cresyl dithiophosphate
CAS name:	Phosphorodithioic acid, O,O-bis(methyl-phenyl) ester, sodium salt
Active ingredient, %:	48-52%

Physical properties

Appearance:	Reddish brown to black
Form:	Liquid (aqueous solution)
Boiling point:	Above 100 degrees C (Above 212° F)
Freezing point:	Minus 1 to minus 5 degrees C (30 to 23° F)
Specific gravity:	1.14 gm/ml at 20 degrees C (9.5 lb/gallon at 68° F)
Flash point:	None. The flame is extinguished at 65°C (149° F) in the Pensky-Martens closed cup.



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Safety and handling

Danafloat collectors are manufactured under the highest quality standards; nonetheless, these chemicals can be hazardous and harmful. Therefore, always read and understand the MSDS before handling the product.

Safe handling includes use of safety glasses, splash shield over face, natural rubber gloves and protective clothing. Additionally, avoid inhalation of vapours.

Storage

When properly stored, *Danafloat 068* has a shelf life of at least 2 years provided the product is stored under the following guidelines:

+ Store the product in a dry and well-ventilated location away from heat and sunlight

- + Use a first in-first out inventory control
- + Avoid freezing
- + Store in plastic drums, polypropylene IBCs/totes, or coated steel drums.

Environmental impact

Most of the *Danafloat 068* dosed to a flotation circuit is typically adsorbed to the concentrate mineral particles and removed from the system. Any residual in the water phase and adsorbed to minerals that are not floated report to the tailings.

The product is biodegradable at low concentrations. It undergoes degradation in the environment and in waste water

treatment plants. Degradation occurs both aerobically and anaerobically.

Release of the product directly to natural water streams should be avoided. Cresols show high acute toxicity both towards fish (96 h-LC₅₀, 1-10 mg cresol/litre) and to aquatic invertebrates.

Packing

Danafloat mineral collectors are supplied in a range of containers including plastic drums, coated steel drums, polypropylene IBCs/totes and tank containers having the following net product weights:

Drums (plastic and metal)	225 kg (496 lbs.)
IBCs/Totes	1000 - 1075 kg (2205 -2370 lbs.)
Tank containers	approx. 20 mt (44,092 lbs.)

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