



## Danafloat™ 571 mineral collector

### Application

*Danafloat 571* is an aqueous solution of dialkyl dithiophosphate and mercaptobenzothiazole.

*Danafloat 571* has little or no frothing properties. It requires a longer conditioning time than do xanthates and for this reason is usually added to a conditioning step or in some instances to the grinding mill.

*Danafloat 571* is a stronger collector than *Danafloat 271* and forms more froth. It is an excellent collector for tarnished or rapidly oxidizing ores, which are normally difficult-to-float ores. *Danafloat 571* has found application in the flotation of liberated gold, partly free and partly associated with pyrite and arsenopyrite. It is rated an excellent collector in the flotation of auriferous pyrite, particularly in acid circuits. The collector floats oxidized galena well, but has a quite strong effect on sphalerite and should therefore be used with great care. *Danafloat 571*

should be considered as a sphalerite collector in any screening test programme. It is also an excellent collector in the flotation of copper and nickel. In many instances a scavenger collector, e.g. xanthate, is used for optimum recovery. *Danafloat 571* should be considered as co-collector in the flotation of copper ores, particularly if part of the copper is oxidized or tarnished.

*Danafloat 571* can be added undiluted or preferably diluted with clear water to 5-20% solutions. It is good practice to stir before use.

The dosage of *Danafloat 571* varies with the type of ore, usually falling in the range of 10 to 100 grams per metric ton ore.

Experience has shown that *Danafloat 571* is effective in the pH range of 3-12.

### Composition

|                    |   |
|--------------------|---|
| Chemical name:     | i-butyl-dtp-Na and MBTNa  |
| CAS name:          | Phosphorodithioic acid, 0,0-bis(2-methyl-propyl)ester, sodium salt and 2(3H)-Benzothiazolethione, sodium salt |
| Active ingredient: | 21-24% and 10-12% by weight respectively  |

### Physical properties

|                         |                              |
|-------------------------|------------------------------|
| Appearance:             | Yellow to brown              |
| Form:                   | Liquid (aqueous solution)    |
| Boiling point:          | 102 degrees C                |
| Melting/freezing point: | Minus 6 to minus 7 degrees C |
| Specific gravity:       | 1.118 g/ml at 25 degrees C   |
| Flash point:            | Above 65 degrees C           |



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**Safety and handling**

*Danafloat* flotation collectors are manufactured under carefully controlled conditions. However, to varying degrees they can be considered harmful and therefore before handling this product always carefully read and understand the MSDS for this product.

*Danafloat 571* causes irritation to eyes and skin.

Safe handling includes the use of safety glasses, natural rubber gloves and protective clothing.

**Storage**

- + Store in a dry and well-ventilated place away from heat and sunlight after the principle "first in/first out"
- + Avoid freezing
- + Store in plastic drums or coated steel drums

**Environmental impact**

*Danafloat 571* is biodegradable. LC<sub>50</sub>, 96 hrs Rainbow trout 1.8 mg/l for MBTNa. LC<sub>50</sub>, 48 hrs Daphnia magna 19 mg/l for MBTNa. The majority of the collector is tied up with the

concentrate and is destroyed in subsequent processing operations. The remainder is transferred to the tailings. Release into the water systems should be avoided.

**Packing**

*Danafloat* mineral collectors are supplied in tank containers or plastic drums. If preferred, *Danafloat* collectors may be supplied in coated steel drums.

|                 |               |                        |
|-----------------|---------------|------------------------|
| Tank containers | Net weight:   | approx. 20 mt          |
| IBC containers  | Net weight:   | 1,000-1,075 kg         |
|                 | Gross weight: | approx. 1,059-1,134 kg |

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