Nasaco International Limited

Petite Rue 3, 1304 Cossonay, Switzerland
Tel: + 41 21 863 0310 Fax: + 41 21 863 0311 email: info@nasaco.ch

PRODUCT DATA SHEET

NASFROTH 501

NASFROTH 501 flotation frother is based on mixed higher alcohols. It is a selective frother with fast kinetic response and medium longer term performance, it is slightly stronger than NASFROTH 620 (MIBC) but does not have the disadvantage of low flash point.

NASFROTH 501 is recommended in situations where a high degree of selectivity is required; being a weaker frother it is recommended for fine particle flotation for example in the flotation of fine copper or zinc minerals. Although most commonly used in alkaline flotation, NASFROTH 501 is being used in both acid and alkaline flotation systems from pH 3.5 to pH 12.3

NASFROTH 501 is not water soluble. The product is stable under normal storage conditions.

PHYSICAL PROPERTIES

Flash Point	76°C	(Open Cup)
Appearance	Clear liquid	
Odour	Alcohol like	
Specific Gravity	0.84	(25/25°C)
Water Solubility	1g/l (approx)	
Freezing Point	<-10°C	

Safety and Handling

Nasaco International LLC encourages its customers to use their products in ways which promote safe handling and good industrial practice. Before handling this product, ALWAYS carefully read and understand the instructions and hazard warnings on the container label. Further information may be obtained from the Material Safety Data Sheet for NASFROTH 501

Normal safe handling will not result in health or industrial hygiene hazard. If NASFROTH 501 comes into contact with the eye it may cause moderate eye irritation and corneal injury. The following guidelines should be followed:

- Wear Chemical Workers goggles, clean body covering clothing and rubber gloves when handling NASFROTH 501
- Contaminated clothing should be thoroughly washed before re-use
- If eye contact occurs the eyes should be flushed with water for 15 minutes and medical advice sought.

Application

The three variables in the application of NASFROTH 501 are dosage, point of addition and frequency of addition.

Dosage rates of frother vary from operation to operation, they are largely dependent of ore type, grind size and water chemistry. Whilst dosages vary from 5 to 50 g/t, normal rates are from 15 - 30g/t.

Because of the hydrophobic nature of NASFROTH 501, the addition of the frother at the head of the flotation circuit is normally sufficient for most operations. In some cases, stage addition of frother can lead to improved economics by reducing overall frother dosage.. Testwork will define the optimum dosing regime.

The chemical nature of NASFROTH 501 means that it is a selective frother and will tend to give improved concentrate grades. In plants where a wide range of particle sizes exists, consideration should be given to the blending of frothers, combining a ‘fine’ and ‘coarse’ particle frother can lead to better metallurgical performance.

Protective Clothing

Personnel handling chemicals should wear clean body covering clothing, gloves and chemical workers goggles.

Contamination incidental to normal handling is unlikely to occur, if however skin or eye contact does occur, the following first aid guidelines should be followed.

First Aid

Skin - If skin contact occurs, wash the effected area with plenty of water and a neutral soap for a minimum of five minutes.

Eye - If eye contact occurs, wash with plenty of clean water for a minimum of fifteen minutes, holding the eye open. Medical advice should be sought.

Ingestion - In the case of ingestion, induce vomiting and immediately seek medical attention.

Storage and Handling

Recommended materials of construction for storage and distribution systems of NASFROTH 501 include: Black iron, mild and stainless steel, brass and copper. NASFROTH 501 has a shelf life of at least three years, the low freezing point allows outside storage - out of direct sunlight. Extensive evaluation has shown that NASFROTH frothers are compatible with various types of distribution systems. NASFROTH is insoluble in water and cannot be diluted before addition.

Toxicity and Environmental Impact

NASFROTH frothers exist at low concentrations in flotation cells. A majority of the frother is present in the concentrate and is incinerated in smelting operations. The remainder is usually transferred to the tailings pond or recycled.

The LC_{50} for Daphnia is > 10,000 mg/l and for Fathead Minnow is 11,600 mg/l. The product is regarded as Practically non-toxic.

The recommended method of disposal is by burning under controlled conditions. Customers are advised to check with local, state or national legislation governing disposal of waste material.

Fire

In the case of fire, types A and B extinguishers should be used.

Packaging and Shipping

NASFROTH 501 is packed in IBC containers of 1000 litres.

NASFROTH 501 is not classified according to the Commission of the European Communities (Directive 67/548/EEC)

Notice

Although the information contained herein is presented in good faith and is to the best of Nasaco International Limited's knowledge true and accurate, it is made for informal purposes only and without any warranty whatsoever. Due to the special nature of the product and its applications, Nasaco International Limited does not accept any responsibility or liability whatsoever which may result from the use of this information. The information contained herein is not to be construed as a license to operate under, or a recommendation to infringe any existing patents, nor should it be confused with any Governmental or insurance requirements or with any national or international safety codes.