Nasaco International Limited

Petite Rue 3, 1304 Cossonay, Switzerland

PRODUCT DATA SHEET

NASCOL 306

Chemical Name:	Potassium Amyl Xanthate	
Chemical Formula:	$C_5H_{11}OCS_2K$	
Molecular Weight:	202.3	
Specification:	% Xanthate by weight	90% min (acetone method)
	% Acetone insolubles	8% max
Properties:	Form	Free flowing Pellet
	Colour	Yellow/orange
	Solubility	Complete solubility in water

Decomposition

All xanthate products hydrolyse slowly in the presence of moisture producing carbon disulphide, an explosive gas.

Activity

The method used for determination of active xanthate content is the acetone method. On a dry weight basis, the active xanthate content is a minimum 90%. Manufacture is from high quality raw materials, components which could destroy the selectivity of the product have been excluded.

Application

Potassium amyl xanthate is used as a collector for sulphide minerals in alkaline flotation circuits. Use in acid circuits will lead to the decomposition of the product. It is widely used for copper, iron, and molybdenum sulphide minerals as well as for native metals such as gold.

Potassium amyl xanthate can be used as a collector for oxide minerals of base metals which have previously been treated by sulphidisation.

Potassium amyl xanthate is the strongest and the least selective of the xanthates. It can be used in either rougher or scavenger flotation.

Dosage

Dosage rates of potassium amyl xanthate vary from 15 to 75 g/t of ore.

Potassium amyl xanthate is normally added to the pulp before flotation as an aqueous solution of between 3 and 10% by weight.

It is recommended that solutions be stored for no longer than 3 days due to the formation of carbon disulphide.

Handling & Storage

Normal safe handling of potassium amyl xanthate should present little risk. The following storage and handling recommendations should be followed.

- Dusting should be eliminated by emptying drums carefully on dissolution
- Potassium amyl xanthate should be stored indoors with good ventilation. When in solution, the head space of the storage vessel should be ventilated to avoid carbon disulphide build up.
- Do not allow containers to corrode, as this leads to decomposition of the product by hydrolysis. Used containers on a first in first out basis.
- Unused drums should be kept sealed. Containers should be opened carefully under well ventilated conditions. No naked lights.

Protective Clothing

Personnel handling xanthate 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 affected 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. Medical advice should be sought.

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

Toxicity

The acute oral LD_{50} in rats is 800 mg/kg. Prolonged contact with the product or its solutions may cause skin irritation.

Fire

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

Packaging

Potassium amyl xanthate is supplied in open top steel drums of 150kg net weight or in Big Bags of 900kg net weight.

Transport

UN Packing Group II or III
UN No.: 3342
INCO Page 8144: ADR Class 4.2
Shipping Name: Spontaneously combustible, Xanthate

Further information and samples are available from:

Nasaco International Limited
Petite Rue 3
1304 Cossonay
Switzerland

Fax: + 41 21 863 0311

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