



# AMMONIUM BISULPHITE SOLUTION

## MATERIAL SAFETY DATA SHEET

### 1 - IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY

Substance

Chemical name Ammonium Bisulphite  
Commercial names and synonyms Ammonium Bisulphite Solution - Win Bas  
Solfosol A - Supersolfosol - Neosolfosol C  
Ammonium Hydrogen Sulphite  
Nomenclatura Chemical Abstract Ammonium Acid Sulphite

# Uses

Food aid – Oxygen scavenger in water treatment

Company

Tel. +39-0321-790-300 (please see bottom of the page)

# Emergency service

Niguarda Hospital tel. +39-02-6610-1029

### 2 - COMPOSITION / INFORMATION ON INGREDIENTS

- **General description of the components, relative concentrations and risks**

CAS registration number 10192-30-0  
EC number 233-469-7  
Formula  $\text{NH}_4\text{HSO}_3$   
Classification Xi, R31, R36/37, S26

### 3 - HAZARDS IDENTIFICATION

Dangerous classified substance according to official current regulations.

Health risks Irritant to eyes and respiratory apparatus.  
Contact with acids liberates sulphur dioxide ( $\text{SO}_2$ ) toxic gas

Environmental risks If discharged into surface water, the product can cause oxygen reduction and ammonia increase, with negative consequences on living organisms

Physical and chemical hazards Non flammable product.  
Fire and explosion Low risk level. In case of nearby fire, it can release sulphur dioxide ( $\text{SO}_2$ ) toxic gas

### 4 - FIRST AID MEASURES

Seek medical advice immediately.

Inhalation Move to open air. Supply pure oxygen if breathing is difficult. Proceed to artificial respiration only if breathing has stopped

Skin contact Remove all contaminated garments. Thoroughly wash with water for at least 15 minutes

Eyes contact Immediately rinse with water for at least 15 minutes.  
Seek medical advice

Ingestion Let ingest water. Seek medical advice

Product: Ammonium Bisulphite Soln  
Sheet code: BAS2(0106)E8

Revision n° 8  
Updatings: #

Date of issue: January 2006  
page 1/4

## MATERIAL SAFETY DATA SHEET



### 5 - FIRE-FIGHTING MEASURES

Advised extinguishing agents	Non-flammable product. Use water only in case of nearby fire
Extinguishing agents to be avoided	None
Dangers caused by combustion matters	Sulphur dioxide - Ammonia
Protection measures in case of intervention	Breathing apparatus.
Additional information	The water used for fire extinguishing, contaminated by the product, must be disposed of according to current local regulations

### 6 - ACCIDENTAL RELEASE MEASURES

Collection and disposal methods	<u>Small quantities:</u> rinse with water and treat the contaminated water oxidising it with hydrogen peroxide and neutralising it with soda or lime. <u>Big quantities:</u> stem with sand or soil and collect it mechanically in suitable containers
Person-related safety precautions	Provide suitable ventilation. Wear suitable protection clothes. Keep the weather gauge
Environmental protection	Prevent product from flowing into sewers or water courses

### 7 - HANDLING AND STORAGE

Handling	Carefully avoid localised heating, which would cause violent exothermic reactions. The product slowly releases sulphur dioxide, even at room temperature. In cool climates it is necessary to maintain a temperature of more than 10 °C to avoid crystallizations
Storage	Suitable catch basins are to be foreseen. Store in a cool and well ventilated place. Do not store near oxidising agents, acids or products able to release acids

### 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory protection	Complete facial mask with sulphur dioxide cartridge.
# Skin protection	Suitable protective garments for chemicals
# Hands protection	Safety gloves for chemicals
Eyes protection	Safety glasses with side guards. Do not wear contact lenses.
Exposure limit	TLV - TWA: unknown (# 2 ppm with respect to SO <sub>2</sub> ) (ACGIH 2005)

# MATERIAL SAFETY DATA SHEET



## 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	physical state colour	clear liquid citrine yellow
Smell		of sulphur dioxide
Melting-point		not applicable
Boiling-point		unknown
Density at 20 °C		1.30-1.40 kg/dm <sup>3</sup> (variable in conformity with the concentration)
Solubility in water		miscible with water in any proportion
Inflammability-point		not applicable
Inflammability limits (% vol in air)		not applicable
Temperature of self-ignition		not applicable
pH		4.5 - 5.5
Distribution coefficient n-octanol/water		unknown

## 10 - STABILITY AND REACTIVITY

Conditions to be avoided	Violent heating: if violently heated, and exothermic reaction can take place with product transformation into ammonium tiosulphate and sulphur and release of sulphur dioxide. The exothermic reaction goes on until total transformation of bisulphite into ammonium sulphate and sulphur with release of great quantities of heat
# Products to be avoided	Acids - Oxidising agents - Nitrites
Dangerous decomposition by-products	Sulphur dioxide - Ammonia

## 11 - TOXICOLOGICAL INFORMATION

Penetration ways	Inhalation yes Ingestion improbable event Contact yes
Acute toxicity	Data not available
Inhalation consequences	Irritation of principal respiratory tracts
# Ingestion consequences	Irritation to mouth and throat (improbable event)
# Skin local effect	Not irritant - In extreme cases only allergic people may suffer from irritation
Eyes local effect	Irritation
Additional information	Unknown

## 12 - ECOLOGICAL INFORMATION

If discharged into surface water, the product can cause a considerable oxygen reduction and ammonia increase, with negative consequences on living organisms.

## 13 - DISPOSAL CONSIDERATIONS

Product	Inorganic product not to be disposed of through biological treatment systems. Product residuals to be disposed of according to official current regulations and using authorised disposal pumps
Contaminated packages	Empty the package, unfold it completely and dispose of it according to the packaging material

Product: Ammonium Bisulphite Soln  
Sheet code: BAS2(0106)E8

Revision n° 8  
Updatings: #

Date of issue: January 2006  
page 3/4

# MATERIAL SAFETY DATA SHEET



## 14 - TRANSPORT INFORMATION

Product not subject to ADR/RID and IMO regulations, related to road and sea transport of dangerous goods, even if specifically named, on the basis of the criteria set out in 2.2.8.1.8 ADR/RID (# 2005) and criteria 2.8.2.2 - class 8 of IMDG code (Amdt 31-02).

Additional information To be transported only with means having the loading zone separated respect to the driver's cabin. Make sure that the driver is aware of the prospective risk of the loading and that he knows the actions to be taken in case of accident or in case of emergency

## 15 - REGULATORY INFORMATION

EC labelling	<input type="checkbox"/>	By law
	<input checked="" type="checkbox"/>	Temporary
	<input type="checkbox"/>	Not required
Classification		Xi, R31, R36/37, S26

## 16 - OTHER INFORMATION

Hazard symbols	Xi	Irritant
Risk phrases	R31 R36/37	Contact with acids liberates toxic gas Irritant to eyes and respiratory system
Safety phrases	S26	In case of contact with eyes, wash immediately with plenty of water and seek medical attention

Risks related to sulphur dioxide: Toxic gas by inhalation, heavier than air. It can accumulate itself in closed areas and particularly at soil level or below it. In high concentrations it is corrosive for eyes, respiratory system and skin

Before starting the use of this product for any new process or experiment, it must be carried out a deep study on the safety and on the compatibility of the product itself with the materials.

The information contained in this safety data sheet is given to protect the health and the safety at work. No responsibility is taken for possible damages arising from uses of this information for different purposes as the ones here indicated.

Product: Ammonium Bisulphite Soln  
Sheet code: BAS2(0106)E8

Revision n° 8  
Updateings: #

Date of issue: January 2006  
page 4/4