

# Safety Data Sheet

According To Regulation (EC) No 1907/2006 (REACH)

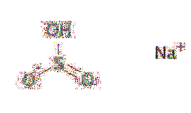
## SODIUM BISULFITE SOLUTION

Version: 2.0  
Form No: 193159

Preparation Date : 7/30/2012  
Revision Date: 7/30/2012

### 1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product Identifier

<b>Product Name</b>	<b>SODIUM BISULFITE SOLUTION</b>
<b>SDS No</b>	193159
<b>CAS No</b>	7631-90-5
<b>EINECS No</b>	231-548-0
<b>Chemical Name</b>	Sodium Bisulfite Solution
<b>Chemical Formula</b>	NaHSO <sub>3</sub> .H <sub>2</sub> O
<b>Structural Formula</b>	

#### 1.2 Relevant Identified Uses Of The Product And Uses Advised Against

<b>Relevant Identified Uses</b>	<p>Antichlore in bleaching fibers and mordant in textile industry</p> <p>Antiseptic in production of cellulose esters</p> <p>Main raw material in production of sodium hydrosulfite, aromatic alcohols and aldehyde</p> <p>Antiseptic in fermentation process</p> <p>Depilator in leather industries</p> <p>Disinfectant in cosmetic and canned industry</p> <p>Various applications in paper, rubber, sugar, galvanoplasty and adhesive industries</p>
<b>Uses Advised Against</b>	See chapter 16 for a general overview

#### 1.3 Details Of The Supplier Of The Safety Data Sheet

<b>Supplier (Manufacturer)</b>	<b>AK-KİM KİMYA SAN. VE TİC. A.Ş.</b> <a href="http://www.akkim.com.tr">www.akkim.com.tr</a>
<b>Address – Factory</b>	Denizçalı Köyü, Taşköprü Mevkii, P.K. 39 77600 Yalova / TÜRKİYE
<b>Telephone</b>	0 226 815 33 00
<b>Fax</b>	0 226 353 25 39

#### 1.4 Information Providing Authority About Safety Data Sheet

	Ali Haydar KETİR – Environmental Engineer
<b>Telephone</b>	+90 (226) 815 33 00 / 33304
<b>Fax</b>	<a href="mailto:ali.ketir@akkim.com.tr">ali.ketir@akkim.com.tr</a>

#### 1.5 Emergency Telephone Number

<b>Company Emergency</b>	0 226 815 33 00
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### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification Of The Product

##### 2.1.1 Classification According to Regulation (EC) No 1272/2008

· Acute toxicity (oral), Category 4

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### 2.1.2 Classification According to Regulation to 67/548/EC

- Xn;R22
- R31

### 2.2 Label elements

#### 2.2.1. Labeling According to Regulation (EC) No 1272/2008 [CLP<sup>1</sup>/GHS<sup>2</sup>]

##### Product Identifier

Hazard Component for Labeling

- Sodium bisulfite

##### Hazard Pictograms



##### Signal Word

- WARNING

##### Hazard Statements

**H302** Harmful if swallowed.

##### Precautionary Statements

###### General

- None

###### Prevention

**P264** Wash thoroughly after handling.

**P270** Do not eat, drink or smoke when using this product.

###### Response

**P301 + P312** IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**P330** Rinse mouth

##### Storage

- None

##### Disposal

- None

##### Supplemental Hazard Information (EU) Statements

**EUH031** Contact with acids liberates toxic gas.

#### 2.2.2. Labeling According to Regulation to 67/548/EEC

##### Hazard Description

According to the EC Regulation No. 67/548/EEC This product is classified as follows:

- Xn;R22
- R31

##### Hazard Component for Labeling

- Sodium bisulfite solution

##### Hazard Symbols

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### Risk Phrases

**R22** Harmful if swallowed

**R31** Contact with acids liberates toxic gas

### Safety Phrases

**S7/9** Keep container tightly closed and in a well-ventilated place.

**S25** Avoid contact with eyes.

**S36** Wear suitable protective clothing.

**S46** If swallowed, seek medical advice immediately and show this container or label.

### 2.2.3. Special Rules For Supplemental Label Elements For Certain Mixtures

None.

### 2.2.4. Additional Labeling

· Not Applicable

## 2.3 Hazard Identification

### 2.3.1. Skin Contact

Directly skin contact or after time delayed may cause slight but significant inflammation.

Repeated exposure may cause contact dermatitis which is characterized such as redness, swelling and blisters (blisters, blisters) symptoms.

Open cuts, worn or irritated skin should not be exposed to this material.

Entry ways to the bloodstream such as cuts, abrasions or lesions may cause create systemic damage with harmful effects.

### 2.3.2. Eye Contact

Based on the available evidence or practical experience, suggested that, the material may cause eye irritation on significant number of people.

Long-term eye contact may cause characterized as a temporary redness of the conjunctival inflammation (wind burn like).

### 2.3.3. Ingestion

Accidental oral uptake of the material may be harmful. The experiments done on animals shows; less than 150 grams of oral intake amount may be fatal or cause serious damage to the person's health.

Uptake of sulfide salts by mouth can cause irritation gastric (stomach).

High doses can lead to severe colic (abdominal pain), diarrhea, circulatory disorders, depression and sometimes death of vital functions.

### 2.3.4. Inhalation

Material may cause respiratory irritation in some people. Such a response to irritation of the body, can cause more lung damage.

Inhalation of the steam or aerosols generated during the normal use of the material, can damage a person's health.

### 2.3.5. Long term effects

Asthma-like symptoms, will continue months or even years after the end of exposure.

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The reason for this, reactive airways dysfunction syndrome (RADS) is non-allergic. The most important criteria for the diagnosis of RADS is a respiratory disease before and there a few minutes after exposure to irritants and non-atopic individuals with persistent asthma symptoms within hours, starts with a sudden. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production

### 2.3.6. Adverse Environmental Effects

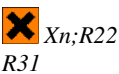

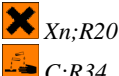

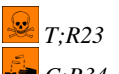

No data available

### 2.4. Additional Information

· None

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Description Of The Substance

NAME	EINECS NO	CAS NO.	CONTENT (%)	CLASSIFICATION	
				DSD	CLP
Sodium bisulfite solution	231-548-0	7631-90-5	15-40		 WARNING Acute toxicity, Category 4, oral; H302
Sulfurous acid	231-973-1	7782-99-2	<1		 DANGER Acute toxicity, Category 4, inhalation; H332 Skin corrosion, Category 1B; H314
Sulfur dioxide	231-195-2	7446-09-5	<1		 DANGER Gases under pressure, liquefied gas; H280 Acute toxicity, Category 3, inhalation; H331 Skin corrosion, Category 1B; H314
Water	231-791-2	7732-18-5	65-60	This material is classified as not hazardous according to EU regulations	

### 3.2 Additional information

· None

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### 4.1.1 General information

· In case of accident or unwellness, seek medical advice immediately (show directions for

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use or safety data sheet if possible).

### 4.1.2 Following inhalation

- First aid is not generally required.
- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained.

### 4.1.3 Following skin contact

- First aid is not generally required.
- Flush skin running water (and soap if available).
- Seek medical attention in event of irritation

### 4.1.4 Following eye contact

- Wash out immediately with water.
- After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

### 4.1.5 Following ingestion

- Rinse out mouth with water.
- Give a glass of water.
- First aid is not generally required.
- If in doubt, contact a Poisons Information Centre or a doctor.

### 4.1.6 Self-protection of the first aider

- Pay attention to self-protection

### 4.1.7 Notes for the doctor

- Symptoms: Cough, shortness of breath, sore throat and laboured breathing (in case of inhalation). Redness and pain (in case of eye contact). Abdominal pain, diarrhoea, nausea and vomiting (in case of ingestion).

## 5. FIRE-FIGHTING MEASURES

### 5.1 General Information and Flammable Properties

- The product itself does not burn.
- In case of fire or above 150 ° C, material decomposes.

### 5.2 Extinguishing media:

- Foam.
- Water

### 5.3 Unsuitable extinguishing media

- None known.

### 5.4 Special hazards arising from the product

- The product itself does not burn.
- In case of fire or above 150 ° C, material decomposes giving toxic sulfur dioxide gas (SO<sub>2</sub>).

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- In case of fire; Sodium oxides, Sulphur oxides may arise.
- Sodium bisulphite gives off toxic and irritant fumes when heated or burning Heating of container(s) may cause pressure rise with risk of bursting

### 5.5 Advice for fire-fighters

- Wear NIOSH<sup>3</sup> approved breathing apparatus , eye and face protector and chemical resistant clothes.

### 5.6 Additional information

- Cool endangered containers with water in case of fire.
- Do not allow the quenching water into sewage systems

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

- Avoid inhalation of dusts or particulates.
- May cause severe eye irritation and in case of contact with acids, sulphur dioxide that is irritating to respiratory system, may arise.
- Refer to protective measures listed in section 7 and 8.
- Put on protective equipment before entering danger area.

### 6.2 Environmental precautions

- Cover drains.
- Do not allow to enter into soil/subsoil.
- Do not empty into drains or the aquatic environment..

### 6.3 Methods and material for containment and cleaning up

#### 6.3.1 For containment

- Control personal contact by using protective equipment as required
- Take up contaminated material and pass on for further processing.
- Contain for disposal according to local / national regulations.

#### 6.3.2 For cleaning up

- Control personal contact by using protective equipment.
- Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal
- Place in a suitable, labelled container for waste disposal.
- Dispose of in accordance with legal regulations and place in a suitable, labeled container for waste disposal
- Collect recoverable product into labeled containers for recycling.

#### 6.3.3 Other information

- Dispose of waste material according to local, state and federal regulations.

### 6.4 Reference to other sections

- Dispose of contaminated material as waste in accordance with section 13.
- See Section 13.

## 7. HANDLING AND STORAGE

### 7.1.1 Precautions for safe handling

### 7.1.2 Protective measures

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### Personal preventions

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- DO NOT enter confined spaces until atmosphere has been checked.
- DO NOT allow material to contact humans, exposed food or food utensils.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately. Launder contaminated clothing before re-use.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

### Fire preventions

- See section 5.

### Environmental precautions:

- Dispose of waste material according to local, state and federal regulations.

### 7.1.3 Advice on general occupational hygiene

- Use good occupational work practice.
- Comply with the health and safety at work laws.
- Remove contaminated clothing and protective equipment before entering eating areas.

### 7.2 Conditions for safe storage, including any incompatibilities

- The product can be stored without activity loss in dry and closed areas.
- In humid environment, the decomposition of SO<sub>2</sub> occurs and it causes activity loss of product.
- Prevent contact with air
- Avoid using product in closed areas
- Store in original containers. Never store in aluminium coated or galvanized containers/vessels
- Polyethylene, polypropylene, SS316 may be used for storage.
- SMBS is transported in stainless steel tanker.
- Never allow product to get in contact with water during storage
- Store away from direct sunlight.
- Check all containers are clearly labelled and free from leaks.
- Keep containers securely sealed when not in use
- Avoid contact with incompatible materials
- Avoid physical damage to containers.

### STORAGE INCOMPATIBILITY

- Do not store near acids; Contact with acids liberates toxic gas

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- Do not store with water and alcohols.
- Do not store combustible, explosive and radioactive materials. Do not store with oxidizing and flammable materials.
- Observe manufacturer's storing and handling recommendations

### 7.1 Advice on common storage

- Protect against: Humidity. UV-radiation/sunlight.
- See also instructions on the label.
- Store in a cool, dry, well-ventilated area.
- Keep away from food, drink and animal feeding stuffs.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage.

### 7.2 Specific precautions on storage

- Observe the national and local regulations concerning handling and storage.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

Preventive industrial and medical examinations must be carried out according to the application area.

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

#### 8.1.1 Occupational exposure limits

- No data available

### 8.2 Exposure controls

- Adequate ventilation should be used during processing

#### 8.2.1 Appropriate engineering controls:

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/dak.)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/dak.)
Within each range the appropriate value depends on:	
Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only
· Simple theory shows that air velocity falls rapidly with distance away from the	



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opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

- In the immediate working surroundings there must be: Emergency shower installed.
- Make available sufficient washing facilities.
- Provide eye shower and label its location conspicuously.
- See Section 7

### 8.2.2 Personal protection equipment

#### 8.2.2.1 Eye / Face protection:

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly.



#### 8.2.2.2 Skin protection

##### Hand protection

- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:
  - frequency and duration of contact,
  - chemical resistance of glove material,
  - glove thickness and
  - dexterity
- Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).
- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- Contaminated gloves should be replaced.
- Gloves must only be worn on clean hands. After using gloves, hands should be washed

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and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

- Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.
  - polychloroprene
  - nitrile rubber
  - butyl rubber
  - fluorocautchouc
  - polyvinyl chloride
- Gloves should be examined for wear and/ or degradation constantly.

### Body protection

- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

### Other protection

- Handle in accordance with good industrial hygiene and safety practice.

### 8.2.2.3 Respiratory protection

- Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
- The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory . These may be government mandated or vendor recommended.
- Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
- Use approved positive flow mask if significant quantities of dust becomes airborne.
- Try to avoid creating dust condition

### 8.2.3 Environmental exposure controls

- Legislation for the protection of the environment must be met in full.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Appearance

<b>Form/Physical state</b>	Slightly Turbid Liquid
<b>Color</b>	From White To Yellow
<b>Odor</b>	Light sulfur dioxide (SO <sub>2</sub> )
	<b>Value</b>
pH ( 2% in water solution) @ (20(°C)	4,2-5,5
Freezing point/range (°C)	Not available
Boiling point/range (°C)101,3 kPa	101(%15w/w) 102(%25w/w)

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	104(%40w/w)
Melting point (°C)	6(%40 w/w)
Flash Point (°C)closed cup	Not available
Ignition temperature (°C)	Not available
Viscosity cp	Not available
Specific Gravity gr/cm <sup>3</sup>	1,11(%15w/w) 1,19(%25w/w) 1,33(%40w/w)
Solubility in water g/l @ 20°C	Not available
Solubility in ester, ketone and hydrocarbons	Not available
Partition coefficient n-Octanol/Water (log Po/w)	Not available
Explosive Property	None
Oxidation Property	None
Molecule Weight	104

**Note:** The above features were determined according to prescribed methods at the Classification, Packaging and Labeling of Hazardous. Substances Regulation Section A-3 or a method comparable to the other.

### 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

- The product decomposes while releases SO<sub>2</sub> in ambient temperature and atmospheric pressure
- Contact with acids liberates toxic gas.
- In case of fire or above 150 ° C, material decomposes.

#### 10.2 Chemical stability

- Stable under recommended storage and handling conditions. (See section 7.)

#### 10.3 Possibility of hazardous reactions

- Contact with acids liberates toxic gas.
- May react with strong oxidizing agents, acids, sulphides, nitrides, nitrates.
- In contact with oxidizing agents, acids, water or ice toxic and potentially lethal gasses may arise.

#### 10.4 Conditions to avoid:

- Heat, flame, sparks, humidity

#### 10.5 Incompatible materials:

- Strong oxidizing agents, sulphides, nitrides, nitrates ,acids

#### 10.6 Hazardous decomposition products:

- Sulphur dioxide(SO<sub>2</sub>) gas;corrosive and toxic.
- Sodium sulphur (Na<sub>2</sub>S); Strongly corrosive to skin and tissues
- In case of fire; Sodium oxides, Sulphur oxides may arise.
- Sodium bisulphite gives off toxic and irritant fumes when heated or burning

#### 10.7 Hazardous polymerization:

- None.

### 11. TOXICOLOGICAL INFORMATION

#### 11.1 General Information

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<ul style="list-style-type: none"> <li>Routes of exposure:</li> <li>- The substance can be absorbed into the body by ingestion.</li> </ul>		
<b>11.2 Acute toxicity</b>		
<ul style="list-style-type: none"> <li>LD50(Oral-Rat):2000mg/kg</li> </ul>		
<b>11.3 Skin corrosion/irritation and Eye damage/irritation:</b>		
<ul style="list-style-type: none"> <li>In normal conditions no irritation expected on skin contact.</li> <li>In normal conditions no irritation expected on eye contact.</li> </ul>		
<b>11.4 CMR effects (Carcinogenity) :</b>		
<ul style="list-style-type: none"> <li>IARC<sup>4</sup></li> </ul>		
Sulphides	International Agency for Research on Cancer (IARC) Carcinogens	Group 3
Bisulphides	International Agency for Research on Cancer (IARC) Carcinogens	Group 3
Metabisulphides	International Agency for Research on Cancer (IARC) Carcinogens	Group 3
Sulphur dioxide	International Agency for Research on Cancer (IARC) Carcinogens	Group 3
<b>11.5 CMR effects (Mutagenicity and Toxicity for reproduction) :</b>		
<ul style="list-style-type: none"> <li>No data was available concerning mutagenicity and reproductive toxicity</li> </ul>		
<b>11.6 Other Toxicological Effects:</b>		
Allergic Effects	May cause allergic reactions depends on sulphide sensitization	
Effects on Repeated Doses Chronic Exposures	Repeated doses may cause contact dermatite that has symptoms like redness, distention, blister (hydrocele, bubble,,etc).	
Sensitization	No data available	
Developmental Toxicity (Teratogenicity)	No data available	
Fertility	No data available	
<b>11.7 STOT-single/repeated exposures:</b>		
STOT-single exposure	No data available	
STOT-repeated exposure	No data available	
<b>11.8 Symptoms related to the physical, chemical and toxicological characteristics:</b>		
In case of inhalation	Material may cause respiratory irritation in some people. Such a response to irritation of the body, can cause more lung damage. Inhalation of the steam or aerosols generated during the normal use of the material, can damage a person's health.	
In case of skin contact	Directly skin contact or after time delayed may cause slight but significant inflammation. Repeated exposure may cause contact dermatitis which is characterized such as redness, swelling and blisters (blisters, blisters) symptoms.	

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	<p>Open cuts, worn or irritated skin should not be exposed to this material.</p> <p>Entry ways to the bloodstream such as cuts, abrasions or lesions may cause create systemic damage with harmful effects.</p>
In case of eye contact	<p>Based on the available evidence or practical experience, suggested that, the material may cause eye irritation on significant number of people.</p> <p>Long-term eye contact may cause characterized as a temporary redness of the conjunctival inflammation (wind burn like).</p>
In case of ingestion	<p>Accidental oral uptake of the material may be harmful. The experiments done on animals shows; less than 150 grams of oral intake amount may be fatal or cause serious damage to the person's health.</p> <p>Uptake of sulfide salts by mouth can cause irritation gastric (stomach).</p> <p>High doses can lead to severe colic (abdominal pain), diarrhea, circulatory disorders, depression and sometimes death of vital functions.</p>

### 11.9 Additional Toxicological Information:

- Toxicological classifications are based on available knowledge and information
- EEC classification: Xn-Harmful
- The special effects to health are considered by taking into account the information in section 3.

## 12. ECOLOGICAL INFORMATION

### 12.1 Ecotoxicity:

- Acute Fish Toxicity (LC50 96 hour): 100 mg/l
- Acute Daphnia Toxicity (EC50 48 hour): No data available
- Acute Algea Toxicity (IC50 72 hour): No data available
- Median Tolerance Limit (TLm 24,48,96 hour):2600 ppm

#### Sulphur Dioxide[CAS# 7446-09-5]:

- Acute Fish Toxicity (LC50 96 hour):>12.5mg/l

### 12.2 Photo degradation

No data available.

### 12.3 Effects on Waste Water Treatment Plants

Not determined.

### 12.4 Mobility

Liquid  
Solubility in water: Not available  
Refer to ecotoxicity.

Water threat class No data available

Clean Water Impact No data available

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Known or predicted environmental distribution No data available

### 12.5 Results of PBT and vPvB assessment

<i>Biotic</i>	
Ready biodegradability:	No data available
<i>Abiotic:</i>	
Hydrolysis as a function of pH:	No data available
Photolysis:	No data available
Atmospheric oxidation:	No data available

#### **Persistence and degradability:**

Decomposition Potential of the products No data available

The half-life of degradation No data available

Potential degradation of product content in the evaluation of wastewater treatment plants No data available

#### **Bioaccumulation Potential :**

Biological environment (biota) accumulation potential No data available

Potential - nutrients pass through No data available

Reference Values - Log Kow , Sw and BCF No data available

### 12.6 Additional information

- Aquatic toxicity: No data available.
- See the sections 6, 7, 13, 14 and 15.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Product / Packaging disposal

- This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.
- If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means.
- Shelf life considerations should also be applied in making decisions of this type.
- Note that properties of a material may change in use, and recycling or reuse may not always be appropriate
- When recycling of the product is not possible, disposal to landfill or incineration in accordance with all applicable government laws and regulations is recommended.
- Disposal according to local authority regulations.
- Contact waste disposal services

### 13.2 Contaminated packaging

- If there is product residue in the emptied container, follow directions for handling on the container's label.
- Contaminated packaging must be emptied of all residues and can be recycled following appropriate cleaning.

### 13.3 Disposal Methods

- Dispose of chemicals waste or in accordance with local regulations.
- Follow all applicable local laws, rules and regulations regarding the proper disposal of this material.

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- If this product has been altered or contaminated with other hazardous materials, appropriate waste analysis may be necessary to determine proper method for disposal

### 13.4 European Waste Catalogue

- The final classification has to be done together with the local waste disposal company / authority.

## 14. TRANSPORT INFORMATION

BISULPHITES, AQUEOUS SOLUTION, N.O.S. (SODIUM BISULFITE SOLUTION)

	ADR <sup>5</sup> /RID <sup>6</sup>	ADNR	IMDG <sup>7</sup>	ICAO <sup>8</sup> /IATA <sup>9</sup>
TRANSPORTATION	Road	River	Marine	Airways
PROPER SHIPPING NAME	BISULPHITES, AQUEOUS SOLUTION, N.O.S. (SODIUM BISULFITE SOLUTION)			
UN/ID No.	2693	2693	2693	2693
SYMBOL				
CLASS	8	8	8	8
PACKAGING GROUP	III	III	III	III
LABELLING NO	8	8	8	8
CLASSIFICATION CODE	C1			
HAZARD NO (HIN NO)	80			
EmS			F-A;S-B	
MARINE Pollutant			NO	
Road Transport Notes: This product is regulated as a hazardous material.				

## 15. REGULATORY INFORMATION

### 15.1 Safety, Health And Environmental Regulations / Legislation Specific For The Substance

All ingredients are found on the following regulatory lists;;

- “European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)”

### 15.2 Chemical Safety Assessment

No data available

#### 15.2.1 HAZARD

CLP classification according to Annex VI of CLP (Regulation (EC) No 1272/2008)

- Harmful if swallowed.
- Contact with acids liberates toxic gas (Supplemental Hazard Information (EU) Statements)

#### 15.2.2 RISK

- Harmful if swallowed
- Contact with acids liberates toxic gas

### 15.3 INTERNATIONAL REGULATIONS

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- This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006 and ISO 11014:2009. This product is classified according to EU Directive 67/548/EC and GHS/CLP.

### 16. OTHER INFORMATION

#### 16.1 Other information

- For additional information regarding **AK-KIM KIMYA SAN. VE TIC. ŞTİ.** products please contact the **AK-KIM KIMYA SAN. VE TIC. A.Ş** Vedat Ateşoğlu - [vatesoglu@akkim.com.tr](mailto:vatesoglu@akkim.com.tr)
- The above information complies with the 199/45/EC and 1907/2006 Directives and their amendments.
- In all cases of potential poisoning supportive therapy is of the utmost importance.

#### 16.2 Related Person

- Vedat Ateşoğlu - [vatesoglu@akkim.com.tr](mailto:vatesoglu@akkim.com.tr) Ak-Kim Kimya San. Ve Tic. A.Ş
- Prepared by : Ali Haydar KETİR - Ak-Kim Kimya San. Ve Tic. A.Ş [ali.ketir@akkim.com.tr](mailto:ali.ketir@akkim.com.tr)
- **Competent Person Accreditation no : TSE GBF-0855 28.07.2011**

#### 16.3 Revision Date, Version and SDS no

- Date : July 30, 2012
- Version : 2.0
- MSDS No : 193183

#### 16.4 Reason of re-issue

- Compiling according to Regulation (EC) No 1272/2008

#### 16.5 Relevant R-, H- and EUH-phrases (number and full text):

R22	Harmful if swallowed
R20	Harmful by inhalation
R23	Toxic by inhalation
R31	Contact with acids liberates toxic gas
R34	Causes burns
H280	Contains gas under pressure; may explode if heated
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H331	Toxic if inhaled
H332	Harmful if inhaled

#### 16.6 Legal disclaimer

- The purpose of the above information is to describe the products only in terms of health and safety requirements.
- The information given should not, therefore, be construed as guaranteeing specific properties or as specification.
- Customers should satisfy themselves as to the suitability and completeness of such information for their own particular use.
- The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication.



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- *The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.*
- *The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. Due to the many factors outside our control when using this product, we cannot accept liability for any injury, accident, loss or damage caused through its use.*

<sup>1</sup> CLP:Classification Labelling and Packaging

<sup>2</sup> GHS:Global Harmonised System

<sup>3</sup> NIOSH-National Institute of Occupational Safety and Health( Ulusal İş Sağlığı ve Güvenliği Enstitüsü)

<sup>4</sup> IARC: (The International Agency for Research on Cancer) Uluslararası Kanser Araştırma Ajansı

<sup>5</sup> ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

<sup>6</sup> RID: Regulations Concerning the International Transport of Dangerous Goods by Rail

<sup>7</sup> IMDG: International Maritime Code for Dangerous Goods

<sup>8</sup> ICAO: International Civil Aviation Organization

<sup>9</sup> IATA: International Air Transport Association