Safety Data Sheet

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

SODIUM BISULFITE SOLUTION (E222)

Version:	3.1	Preparation Date :	1/24/20192
Form No:	193159	Revision Date:	1/24/2019

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

1.1 Product Identifier

Product Name	**SODIUM BISULFITE SOLUTION (E222)**
SDS No	193159
Synonyms	Sodium Hydrogen Sulfite, Sodium Bisulphite

1.2 Relevant Identified Uses Of The Product And Uses Advised Against

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

1.3 Details Of The Supplier Of The Safety Data Sheet

Supplier (Manufacturer)	**Ak-Kim Kimya Sanayi ve Tic. A.Ş.-İnorganik Tesisler** www.akkim.com.tr
Address – Factory	Merkez Mahallesi, Ak-Kim Sokak, No:7 Taşköprü, Çiftlikköy / Türkiye
Telephone	0 226 815 33 00
Fax	0 226 353 25 39

1.4 Information Providing Authority About Safety Data Sheet

	Ali Haydar KETIR – Environmental Engineer
Telephone	+90 (226) 815 33 00 / 33304
E-mail	ali.ketir@akkim.com.tr

1.5 Emergency Telephone Number

Company Emergency	0 226 815 33 00

2. HAZARDS IDENTIFICATION

2.1 Classification Of The Product

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

- Acute toxicity, Category 4, oral; H302
- Skin corrosion, Category 1C; H314
- Serious eye damage, Category 1; H318

2.2 Label elements

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

Product Identifier

Hazard Component for Labeling

- Sodium bisulfite

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Hazard Pictograms

Signal Word

· DANGER

Hazard Statements

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

Precautionary Statements

General

· None

Prevention

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash with water thoroughly after handling.

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

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

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

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

P321 Specific treatment (see on this label).

P330 Rinse mouth.

P363 Wash contaminated clothing before reuse.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/container at approved waste disposal facility.

Supplemental Hazard Information (EU) Statements

EUH301 Contact with acids liberates toxic gas.

2.2.2. Special Rules For Supplemental Label Elements For Certain Mixtures

None.

2.2.3. Additional Labeling

· Not Applicable

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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. 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 bronchially per reactivity 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 characterized by dyspnea, cough and mucus production

2.3.6. Adverse Environmental Effects

No data available

2.4. Additional Information

· *None*

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3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Description Of The Substance

NAME	EINECS NO	CAS NO.	CONTENT (%)	CLASSIFICATION CLP
Sodium bisulfite solution	231-548-0	7631-90-5	15-40	Acute toxicity, Category 4, oral; H302 Skin corrosion, Category 1C; H314 Serious Eye Damage, Category 1; H318
Sulfurous acid	231-973-1	7782-99-2	<1	Acute toxicity, Category 4, inhalation; H332 Skin corrosion, Category 1B; H314
Sulfur dioxide	231-195-2	7446-09-5	<1	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 Regulation (EC) No 1272/2008.

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 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.

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- 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 labored breathing (in case of inhalation). Redness and pain (in case of eye contact). Abdominal pain, diarrhea, nausea and vomiting (in case of ingestion).

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media:

- Foam.
- Water

5.2 Unsuitable extinguishing media

- None

5.3 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_2).
- Wear full chemical protective clothing. In case of fire: Wear self-contained breathing apparatus.
- 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.

5.4 Advice for fire-fighters

- Wear full chemical protective clothing.
- Wear NIOSH approved breathing apparatus, eye and face protector and chemical resistant clothes.

5.5 Additional information

- Intervention Actions-General
- Keep upwind. Put on protective equipment before entering danger area.
- Intervention Actions-Fire (involving the substance)
- Do not approach near to hot container(s).
- Keep container(s) cool with water spray.
- Avoid unnecessary run-off of extinguishing media which may cause pollution.

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.

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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

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 reuse.
- 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.

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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 SO2 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 aluminum 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.
- 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

- Keep container tightly closed. Keep container in a cool, well-ventilated area.

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

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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:

- Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.
- Ensure that eyewash stations and safety showers are proximal to the work-station location.
- Keep away from food, drink and animal feeding stuffs.
- Use personal protective equipment according to EN ^{3}standards.
- See Section 7

Type of Contaminant:	Air Speed:
Solvent, vapors, degreasing etc., evaporating from tank (in still air)	0.25-0.5 m/s (50-100 f/min.
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/min.

Within each range the appropriate value depends on:	
Lower end of the range	Upper end of the range
1: Room air currents minimal or favorable 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 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.

8.2.2 Personal protection equipment

8.2.2.1 Eye / Face protection:

- Safety glasses with side shields.

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- 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.

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

- Respiratory 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).

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- 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

Form/Physical state	Slightly Turbid Liquid
Color	From White To Yellow
Odor	Light sulfur dioxide (SO_2)

	Value
pH (0.5 % water solution)	4,2-5,5
Boiling point (° C)	101(%15w/w) 102(%25w/w) 104(%40w/w)
Melting point (°C)	6(%40 w/w)
Flash point (° C)	No data available
Specific Gravity gr/cm3	1,11(%15w/w) 1,19(%25w/w) 1,33(%40w/w)
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

10.2 Chemical stability

- The product decomposes while releases SO_2 in ambient temperature and atmospheric
- pressure
- Contact with acids liberates toxic gas.
- In case of fire or above 150 ° C, material decomposes.
- 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.

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- 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_2) gas; corrosive and toxic.
- Sodium sulphur (Na_2S); 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

- Routes of exposure:

The substance can be absorbed into the body by ingestion.

11.2 Acute toxicity

- LD50(Oral-Rat):2000mg/kg

11.3 Skin corrosion/irritation and Eye damage/irritation:

- In normal conditions no irritation expected on skin contact.
- In normal conditions no irritation expected on eye contact.

11.4 CMR effects (Carcinogenity) :

- IARC

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

11.5 CMR effects (Mutagenicity and Toxicity for reproduction) :

- No data was available concerning mutagenicity and reproductive toxicity

11.6 Other Toxicological Effects:

Allergic Effects	May cause allergic reactions depends on sulphide sensitization
Effects on Repeated Doses Chronic Exposures	Repeated doses may cause contact dermatitis that has symptoms like redness, distention and blister (hydrocele, bubble, etc.)
Sensitization	No data available

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Developmental Toxicity (Teratogenicity)	No data available
Fertility	No data available

11.7 STOT-single/repeated exposures:

STOT-single exposure	No data available
STOT-repeated exposure	No data available

11.8 Symptoms related to the physical, chemical and toxicological characteristics:

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. 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.
In case of 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).
In case of 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.

11.9 Additional Toxicological Information:

- Toxicological classifications are based on available knowledge and information
- 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 Algae 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/lATE (Daphnia): 2-20 mg/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
Known or predicted environmental distribution	No data available

12.5 Results of PBT and vPvB assessment

Biotic	
Ready biodegradability:	No data available
Abiotic:	
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

· 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

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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.

13.4 European Waste Catalogue

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

14. TRANSPORT INFORMATION

UN 2693 BISULPHITES, AQUEOUS SOLUTION, N.O.S. (SODIUM BISULFITE SOLUTION)

	ADR[4]/RID[5]	ADNR	IMDG[6]	ICAO[7]/IATA[8]
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)

Safety Data Sheet

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

SODIUM BISULFITE SOLUTION (E222)

Version:	3.1	Preparation Date :	1/24/20192
Form No:	193159	Revision Date:	1/24/2019

15.3 INTERNATIONAL REGULATIONS

- 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 GHS/CLP.

16. OTHER INFORMATION

16.1 Other information

- For additional information regarding **AK-KIM KIMYA SAN. VE TIC. A.S** products please contact the **AK-KIM KIMYA SAN. VE TIC. A.S** Vedat Atesoglu - vatesoglu@akkim.com.tr
- The above information complies with the 1907/2006 Directives and their amendments. In all cases of potential poisoning supportive therapy is of the utmost importance.

16.2 Related Person

- Prepared by: Selçuk BİLGİN (selcuk.bilgin@doruksistem.com.tr)
- Acc. No: TSE GBF-A-0-2707 21.12.2017
- www.MsdsMarket.com ; info@doruksistem.com.tr ; 02163378383

16.3 Revision Date, Version and SDS no

- Date : January 24, 2019
- Version : 3.1
- SDS No : 193159

16.4 Reason of re-issue

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

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

H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious 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.
- 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

Safety Data Sheet

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

SODIUM BISULFITE SOLUTION (E222)

product, we cannot accept liability for any injury, accident, loss or damage caused through its use.

[1] CLP: Classification Laballing and Packaging
[2] GHS: Global Harmonised System
[3] EN Standards: Personal Protective Equipment Standards Determined by CEN (European Committee for Standardization)
[4] ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
[5] RID: Regulations Concerning the International Transport of Dangerous Goods by Rail
[6] IMDG: International Maritime Code for Dangerous Goods
[7] ICAO: International Civil Aviation Organization
[8] IATA: International Air Transport Association
[9]ACGIH: American Conference of Governmental Industrial Hygienists