

# SAFTY DATA SHEET

## MENADIONE SODIUM BISULFITE COMPLEX

### 1. Identification of the substance/preparation and of the company/undertaking

**Identification of the substance or preparation:**

Trade name: MSBC

Chemical name: Menadione Sodium Bisulfite Complex

REACH registration NO.: Not available

**Use of substance/preparation:**

Used as animal feed additive only.

**Company/undertaking identification:**

Manufacture: Brother Enterprises Holding CO., Ltd

Address: Zhouwangmiao, Haining City, Zhejiang Province, China

E-mail:

Telephone: 0086-573-87015338

Fax: 0086-573-87015333

**Telephone NO. of Technical support:**

0086-573-87536768

### 2. Hazards identification

**Classification of the substance/preparation according to EC directives :**

The mixture is classified as "Irritant" according to 67/548/EEC.

The mixture is classified as "Dangerous for the environment" according to 67/548/EEC.

The mixture is classified as "Harmful substances or preparations" according to 67/548/EEC.

The mixture is classified as "Eye Irrit.2" according to Regulation (EC) No 1272/2008.

The mixture is classified as "STOT SE 3" according to Regulation (EC) No 1272/2008.

The mixture is classified as "Skin Irrit.2" according to Regulation (EC) No 1272/2008.

The mixture is classified as "Aquatic Chronic 3" according to Regulation (EC) No 1272/2008.

**The most important adverse physicochemical efforts:**

Not applicable.

**The most important adverse human health efforts:**

May cause irritation to skin, eyes and respiratory tract.

**The most important adverse environmental efforts:**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 3. Composition/information on ingredients

**Substance/mixture:** mixture

**Hazardous ingredient (s) :**

**According to Directive 67/548/EEC:**

Chemical name	Registration No.	CAS No.	EC No.	Classification	Concentration
Menadione Sodium Bisulfite	N/A	130-37-0	204-987-0	Xi;R36/37/38 R50/53	≥65.0%
Sodium bisulfite	N/A	7631-90-5	231-548-0	Xn;R22 R31	≤40.0%

**According to REGULATION (EC) No 1272/2008:**

Chemical name	Registration No.	CAS No.	EC No.	Classification	Concentration
Menadione Sodium Bisulfite	N/A	130-37-0	204-987-0	Eye Irrit.2 STOT SE 3 Skin Irrit.2 Aquatic Chronic 3	≥65.0%
Sodium bisulfite	N/A	7631-90-5	231-548-0	Acute tox.4*	≤40.0%

Classification-The full texts of GHS Pictograms, Hazard Statement, Precautionary Statement according to REGULATION (EC) No 1272/2008 and R-phrase(s) according to 67/548/EEC are given in Section 15, 16.

### 4. First aid measures

**General information:**

In all case of doubt, or symptoms persist, seek medical attention.

**Inhalation:**

Flush nose and mouth with cold water, get medical attention.

**Skin contact:**

Remove contaminated clothing, wash with plenty of cold water, apply antirritation cream.

**Eye contact:**

Rinse with plenty of cold water, get medical attention for proper care.

**Ingestion:**

Rinse mouth with cold water. In order to dilute gastric contents, drink plenty of water. At the first symptoms, seek medical advice and show in any case this material safety data sheet .

**5. Fire-fighting measures**

In case of fire, product may form irritant menadione vapors and toxic fumes due to the presence of CO and SO<sub>x</sub>. Extinguish preferably with water spray, carbon dioxide, dry chemical, foam. All persons fighting a fire in confined spaces must wear adequate protective equipment including self-contained breathing apparatus.

**6. Accidental release measures**

Wear individual protective equipment according to the circumstances. Collect spilled material avoiding dusts formation. Do not allow product to enter drains, surface waters. Transfer in suitable containers for disposal in compliance with law.

**7. Handling and storage*****Handling:***

When handling apply local exhaust ventilation. Avoid dust formation. Wear protective equipment (see sect. 8) Avoid skin contact and eye contact. Wash thoroughly with cold water after handling.

***Storage:***

Keep containers tightly closed and away from heat. Store in cool, dry and well ventilated place. Avoid heat and light exposure, store separate from basic substances. Standard packaging: carton boxes with inner polyethylene bag.

***Specific use(s):***

Not applicable.

**8. Exposure control/Personal control*****Exposure limit value:***

Not applicable.

***Exposure control - General protective advice:***

Avoid dust formation.

***Exposure control - Personal protective equipment:***

Respiratory protection: particulate dust respirator.

Hand protection: industrial quality gloves (PVC, rubber).

Eye protection: safety goggles.

***Exposure control - Environmental exposure controls:***

Not applicable.

## 9. Physical and chemical properties

### **General information:**

Appearance:	crystalline powder
Color:	white to yellowish
Odor:	odorless.

### **Important health, safety and environmental information:**

pH (sol 10 % in water):	4.0 --7.0
Melting point/range(°C):	104-107°C
Boiling point/range(°C):	not applicable.
Flash point(°C):	not applicable.
Ignition temperature(°C):	not applicable.
Vapor pressure(20°C):	not applicable.
Oxidizing properties:	reducer
Density(g/cm <sup>3</sup> ) (20°C):	not applicable.
Refraction index:	not applicable.
Bulk density:	0.6-0.8g/cm <sup>3</sup>
Water solubility at 20°C:	1g/2ml
n – Octanol/water	not applicable.
Molecular weight:	330.29
Explosion limits: Lower:	5g/m <sup>3</sup> < C <sub>min</sub> < 18g/m <sup>3</sup>
Upper:	not applicable.

### **Other information:**

Not applicable.

## 10. Stability and reactivity:

### **Conditions to avoid:**

The product is stable under the suggested handling and storage conditions (see sect. 7) not causing dangerous reactions.

### **Materials to avoid:**

Strong oxidising agents, strong acids, strong alkalis.

### **Hazardous decomposition products:**

Irritant menadione vapours and fumes containing CO, CO<sub>2</sub>, , SOx, are produced respectively by thermal decomposition or when the product burns.

**11. Toxicological information:*****Toxicokinetics, metabolism and distribution:***

Not applicable.

***Test substance:*** menadione sodium bisulfate

***Acute toxicity:***

LD50(Oral, rat) >2000mg/kg

***Sensitization:***

Skin irritation: Negative - determined on rabbit. Observed effects from industrial exposure suggest to consider the product irritating to skin.

Eye irritation: positive - determined on rabbit.

***Repeated dose toxicity(sub-acute to chronic):***

Not applicable.

***CMR effect (Carcinogenicity, mutagenicity and toxicity for reproduction)***

This product is not listed as a carcinogen or a potential carcinogen in IARC or OSHA. There is no evidence of mutagenic or teratogenic effects.

**12. Ecological information:*****Ecotoxicity:***

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

***Mobility:*** Not applicable.

***Persistence and degradability:***

The biodegradation is 17% after 28 days of incubation. MSB can not be assessed as readily biodegradable.

***Bioaccumulative potential:*** Not applicable.

***Result of PBT assessment:*** Not applicable.

***Other information:***

Use the product according to good manufacturing and handling practice, do not dispose improperly.

### 13. Disposal consideration

#### ***Disposal methods of the substance/preparation:***

Whatever cannot be saved for recovery or recycling should be managed in an appropriate waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations.

#### ***Disposal methods of the contaminated packaging:***

Dispose of contaminated packaging and unused contents in accordance with federal, state and local requirements.

### 14. Transport information

	<b><i>Road &amp; rail transport</i></b>	<b><i>Sea transport</i></b>	<b><i>Air transport</i></b>
<b><i>UN-Number:</i></b>	3077	3077	3077
<b><i>Class:</i></b>	9,12c	9,12c	9,12c
<b><i>Proper shipping name:</i></b>	Environmentally hazardous substance, solid, N.O.S. (Menadione Sodium Bisulfite)		
<b><i>Packaging group:</i></b>	III	III	III

### 15. Regulation information

**Chemical Safety Assessment has been carried out?**

**Labelling according to EC Directives:**

***GHS pictograms:***



***Signal word:*** Warning

***Hazard Statement:***

- H400 Very toxic to aquatic life.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.

***Precautionary Statement Prevention:***

- P273 Avoid release to the environment.
- P264 Wash... thoroughly after handling.  
Wear protective gloves/protective clothing/eye protection/face protection.
- P261 Avoid breathing dust/fume/gas/ mist/vapors/spray.
- P271 Use only outdoors or in a well-ventilated area.

**Precautionary Statement Response:**

P391 Collect spillage.

P305 + P351 + P338 If in eyes / Rinse cautiously with water for several minutes/Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists:.../Get medical advice /attention.

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

P312 CALL a POISON CENTER or doctor/physician if you feel unwell.

**Precautionary Statement Storage:**

P403 + P223 Store in a well ventilated place /Keep away from any possible contact with water, because of violent reaction and possible flash fire.

P405 Store locked up.

**Precautionary Statement Disposal:** P501 Disposal of content/container to...

**Other EU regulations:** Not applicable.

**Other National regulations:** Not applicable.

## 16. Other information

### ***Relevant R-phrases:***

R36/37/38 Irritating to eyes, respiratory system and skin.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### ***Training instructions:***

All persons handling this product should be informed of the existence of the hazard, of any possible damage to which they might be subjected and of all requisite protective measures to prevent such damage.

***Recommended restrictions:*** For use in animal feed only

### ***Notice to reader:***

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with a any other product or process, is the responsibility of the user.