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Safety data sheet

BASF Safety data sheet
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Product: **Sodium Metabisulfite food grade (E223)**

(30042375/SDS_GEN_PH/EN)
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1. Substance/preparation and manufacturer/supplier identification

Product name:
Sodium Metabisulfite food grade (E223)

Use: food additive(s)

Recommended use: inorganic reducing agents, initial product for chemical syntheses, process chemical

Manufacturer/supplier:
BASF Philippines, Inc.
Upper Penthouse CTP ASEAN Tower
Asean Drive, Spectrum District
Filinvest Corporate City, Alabang,
Muntinlupa City, 1781, Metro Manila
PHILIPPINES
Telephone: +63 2 8811-8001
E-mail address: psr.ph@basf.com

Emergency information:
National emergency number:
+63 2 8831 5576
International emergency number:
Telephone: +49 180 2273-112

2. Hazard identification

Classification of the substance and mixture:
Acute toxicity: Cat.4 (oral)
Serious eye damage: Cat.1
Hazardous to the aquatic environment - acute: Cat.3

Label elements and precautionary statement:

Pictogram:

Signal Word:
Danger

Hazard Statement:

H318	Causes serious eye damage.
H302	Harmful if swallowed.
H402	Harmful to aquatic life.

Precautionary Statements (Prevention):

P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/…
P273	Avoid release to the environment.
P270	Do not eat, drink or smoke when using this product.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P310	Immediately call a POISON CENTER or physician.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330	Rinse mouth.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.

Other hazards which do not result in classification:
No specific dangers known, if the regulations/notes for storage and handling are considered. If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

Contact with acids liberates toxic gas.

3. Composition/information on ingredients

Chemical nature

Substance nature: Substance

disodium disulphite
CAS Number: 7681-57-4

Na2S2O5

E 223

4. First-Aid Measures

General advice:
Remove contaminated clothing.

If inhaled:
If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention. After inhalation of decomposition products: Immediately administer a corticosteroid from a controlled/metered dose inhaler. Seek medical attention.

On skin contact:
Wash thoroughly with soap and water

On contact with eyes:
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Note to physician:
Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., Many individuals are sensitive to sulphite additives and may experience a range of symptoms, including dermatitis, urticaria, angio-oedema, abdominal pain, diarrhoea, bronchoconstriction and anaphylaxis.
Hazards: Risk of sulfur dioxide formation by reaction with gastric acid after swallowing.
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Suitable extinguishing media:
water spray, carbon dioxide, foam, dry powder

Unsuitable extinguishing media for safety reasons:
water jet

Additional information:
Product will not burn.

Use extinguishing measures to suit surroundings.

Specific hazards:
Sulphur dioxide
The substances/groups of substances mentioned can be released if the product is involved in a fire.

Special protective equipment:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:
Product itself is non-combustible; fire extinguishing method of surrounding areas must be considered. Contaminated extinguishing water must be disposed of in accordance with official regulations. In case of fire and/or explosion do not breathe fumes.

6. Accidental Release Measures

Personal precautions:
Avoid contact with the skin, eyes and clothing.Use personal protective clothing.Ensure adequate ventilation.Avoid dust formation.

Environmental precautions:
Do not discharge into drains/surface waters/groundwater.Do not discharge into the subsoil/soil.Retain and dispose of contaminated wash water.

Methods for cleaning up or taking up:
Sweep/shovel up. Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Handling

Use only in well-ventilated areas. Avoid dust formation. Avoid contact with skin and eyes.

Protection against fire and explosion:
The substance/product is non-combustible. No special precautions necessary.

Storage

Segregate from acids and acid forming substances. Segregate from oxidants.

Suitable materials for containers: rubberized, Polyester resin, glass reinforced (Palatal A410), Stainless steel 1.4541, Stainless steel 1.4571, High density polyethylene (HDPE), Low density polyethylene (LDPE)
Further information on storage conditions: Keep away from heat. Keep container tightly closed in a cool, well-ventilated place. Keep container dry. The product consumes oxygen. Danger of lack of oxygen in containers and tanks.

8. Exposure controls and personal protection

Components with occupational exposure limits

The nuisance dust limit value is to be kept.

The substance mentioned develops if the regulation/notes for storage and handling are not observed.

Sulphur dioxide, 7446-09-5;

STEL value 0.25 ppm (ACGIHTLV)
TWA value 13 mg/m3 ; 5 ppm (OEL (PH))

disodium disulphite, 7681-57-4;
TWA value 5 mg/m3 (ACGIHTLV)

Personal protective equipment

Respiratory protection:
Breathing protection if dusts are formed. Suitable respiratory protection for lower concentrations or short-term effect: Particle filter with low efficiency for solid particles (e.g. EN 143 or 149, Type P1or FFP1) Breathing protection if gases/vapours are formed. Combination filter for gases/vapours of organic, inorganic, acid inorganic, alkaline compounds and toxic particles (e. g. EN 14387 Type ABEK-P3)

Hand protection:
Chemical resistant protective gloves
Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1):
e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and other
Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.
Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Tightly fitting safety goggles (splash goggles) (e.g. EN 166)

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Do not inhale vapours or dust. Hands and/or face should be washed before breaks and at the end of the shift.

9. Physical and Chemical Properties

Form:	powder, crystalline	
Colour:	white to slightly yellow	
Odour:	faint odour, of sulfur dioxide	
Odour threshold:	Not determined due to potential health hazard by inhalation.	
pH value:	4.0 - 4.8 (5 %(m), 20 °C)	(pH Meter)
Melting point:	> 150 °C The substance / product decomposes.	(other)

Boiling point:		
	The substance / product decomposes therefore not determined.	
Flash point:		
	not applicable, the product is a solid	
Evaporation rate:		
	The product is a non-volatile solid.	
Flammability (solid/gas):	not flammable	(other)
Lower explosion limit:		
	For solids not relevant for classification and labelling.	
Upper explosion limit:		
	For solids not relevant for classification and labelling.	
Ignition temperature:		
	not applicable	
Thermal decomposition:	150 °C To avoid thermal decomposition, do not overheat.	
Self heating ability:	It is not a substance capable of spontaneous heating.	
Explosion hazard:	not explosive	(Directive 92/69/EEC, A.14)
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.	
Vapour pressure:		
	The vapour pressure of the aqueous solution consists of the partial pressure for water and the partial pressure for sulphur dioxide.	
Density:	2.36 g/cm3 (20 °C)	(OECD Guideline 109)
Bulk density:	1,000 - 1,200 kg/m3	
Relative vapour density (air):		
	The product is a non-volatile solid.	
Solubility in water:	Literature data. 667 g/l (25 °C)	
Partitioning coefficient n-octanol/water (log Pow):		
	not applicable	
Viscosity, dynamic:		
	not applicable, the product is a solid	

Particle characteristics

Particle size distribution:	169.68 - 173.41 µm (standard deviation 1.25 µm) fine particles -	(D50, ISO 13320-1)
	422.29 - 443.58 µm (standard deviation 4.40 µm) fine particles -	(D90, ISO 13320-1)
	49.49 - 51.34 µm (standard deviation 0.63 µm) fine particles -	(D10, ISO 13320-1)

10. Stability and Reactivity

Conditions to avoid:
Avoid humidity.

Thermal decomposition: 150 °C
To avoid thermal decomposition, do not overheat.

Substances to avoid:
nitrites, nitrates, oxidizing agents, acids

Hazardous reactions:
Reacts with nitrites. Reacts with nitrates. Reacts with oxidizing agents. Generation of sulphur dioxide upon exposure to acids. (or conditions.) The product consumes oxygen.

Hazardous decomposition products:
Sulphur dioxide

Chemical stability:
The product is stable if stored and handled as prescribed/indicated.

Reactivity:
No hazardous reactions if stored and handled as prescribed/indicated.

11. Toxicological Information

Routes of exposure

Acute oral toxicity

Experimental/calculated data:
LD50rat (oral): 1,540 mg/kg (OECD Guideline 401)

Acute inhalation toxicity

LC50 rat (by inhalation): > 5.5 mg/l 4 h (IRT)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Tested as dust aerosol.

Acute dermal toxicity

LD50 rat (dermal): > 2,000 mg/kg (OECD Guideline 402)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Assessment of acute toxicity

Of moderate toxicity after single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Symptoms

Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11. Many individuals are sensitive to sulphite additives and may experience a range of symptoms, including dermatitis, urticaria, angio-oedema, abdominal pain, diarrhoea, bronchoconstriction and anaphylaxis.

Irritation

Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

Serious eye damage/irritation rabbit: irreversible damage (OECD Guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:
Skin sensitizing effects were not observed in animal studies. A sensitizing effect on particularly sensitive individuals cannot be excluded.

Experimental/calculated data:
Mouse Local Lymph Node Assay (LLNA) mouse: Non-sensitizing. (OECD Guideline 429)

Germ cell mutagenicity

Assessment of mutagenicity:
No mutagenic effect was found in various tests with bacteria and mammalian cell culture. The substance was not mutagenic in studies with mammals.

Carcinogenicity

Assessment of carcinogenicity:
In long-term studies in rats in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Assessment of reproduction toxicity:
The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity

Assessment of teratogenicity:
No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Experiences in humans

Experimental/calculated data:

With sensitive persons it can lead to an over sensitive reaction.

Specific target organ toxicity (single exposure)

Apart from effects causing lethality, no specific target organ toxicity was observed in experimental studies.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
No substance-specific organtoxicity was observed after repeated administration to animals.

Aspiration hazard

not applicable

12. Ecological Information

Ecotoxicity

Assessment of aquatic toxicity:
Acutely harmful for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish:
LC50 (96 h) 316 mg/l, Leuciscus idus (DIN 38412 Part 15, static)
The details of the toxic effect relate to the nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic invertebrates:
EC50 (48 h) 89 mg/l, Daphnia magna (Directive 79/831/EEC, static)
Nominal concentration.

Aquatic plants:
EC50 (72 h) 43.8 mg/l (growth rate), algae (other, static)
Nominal concentration.

Microorganisms/Effect on activated sludge:
No observed effect concentration (3 h) > 1,000 mg/l, (OECD Guideline 209, aquatic)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Chronic toxicity to fish:
No observed effect concentration (34 d) > 316 mg/l, Brachydanio rerio (OECD Guideline 210, Flow through.)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Chronic toxicity to aquatic invertebrates:
No observed effect concentration (21 d), > 10 mg/l, Daphnia magna (OECD Guideline 202, part 2, semistatic)
Nominal concentration.

Assessment of terrestrial toxicity:

Study scientifically not justified.

Mobility

Assessment transport between environmental compartments:
The substance will not evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is not expected.

Persistence and degradability

Assessment of stability in water:
According to structural properties, hydrolysis is not expected/probable.
Study scientifically not justified.

Sum parameter

Chemical oxygen demand (COD): (calculated) 165 mg/g

Bioaccumulation potential

Assessment bioaccumulation potential:
Accumulation in organisms is not to be expected.

Bioaccumulation potential:
Study scientifically not justified.

Additional information

Other ecotoxicological advice:
Higher concentrations of the substance may cause a strong chemical oxygen consumption in biological sewage-treatment plants and/or waterways.

13. Disposal Considerations

Must be disposed of or incinerated in accordance with local regulations.
Observe national and local legal requirements.

Contaminated packaging:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Domestic transport:

	Not classified as a dangerous good under transport regulations
UN number or ID number	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Sea transport
IMDG

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
	Marine pollutant: no
Special precautions for user	None known

Air transport
IATA/ICAO

	Not classified as a dangerous good under transport regulations
UN number or ID number	Not applicable
Proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

15. Regulatory Information

Other regulations

1. Joint DTI-DENR-DA-DOF-DOH-DILG-DOLE-DOTC Administrative Order No. 01 Series of 2009 on “The Adoption and Implementation of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)”

2. DAO 2015-09 "Rules and Procedures for the Implementation of the Globally Harmonized System (GHS) of Classification and Labelling of Chemicals in Prepration of Safety Data Sheet (SDS) and Labelling Requirements of Toxic Chemical Substances”

3. Republic Act No. 6969, “Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990”

The regulatory information is not intended to be comprehensive. Other regulations may apply to the material

Registration status:

PICCS, PH	released / listed
PICCS, PH	released / exempt

16. Other Information

chemical industry

Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.