

# Safety Data Sheet

## Potassium Metabisulfite food grade (E224)

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Version: 8.0

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(30042359/SDS\_GEN\_US/EN)

### 1. Identification

#### Product identifier used on the label

### Potassium Metabisulfite food grade (E224)

#### Recommended use of the chemical and restriction on use

Recommended use\*: food additive(s)

Recommended use\*: inorganic reducing agents; initial product for chemical syntheses; process chemical

Unsuitable for use: Not intended for sale to or use by the general public.

\* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

#### Details of the supplier of the safety data sheet

##### Company:

BASF CORPORATION  
100 Park Avenue  
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

#### Emergency telephone number

##### 24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP (4357)

#### Other means of identification

Molecular formula:  $K(2)S(2)O(5)$ 

Chemical family: No data available.

Synonyms: Dipotassium disulphite; potassium metabisulfite Use: Chemical;

Food additive

DISULFUROUS ACID, DIPOTASSIUM SALT

### 2. Hazards Identification

According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

#### Classification of the product

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Skin Irrit.	2	Skin irritation
Eye Dam.	1	Serious eye damage
Aquatic Acute	3	Hazardous to the aquatic environment - acute

### Label elements

Pictogram:



Signal Word:

Danger

Hazard Statement:

H318	Causes serious eye damage.
H315	Causes skin irritation.
H303	May be harmful if swallowed.
H402	Harmful to aquatic life.

Precautionary Statements (Prevention):

P280	Wear protective gloves and eye protection or face protection.
P273	Avoid release to the environment.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or physician.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Disposal):

P501	Dispose of contents/container in accordance with local regulations.
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### Hazards not otherwise classified

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.

Labeling of special preparations (GHS):

Contact with acids liberates toxic gas.

## 3. Composition / Information on Ingredients

**According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200**

dipotassium disulphite

CAS Number: 16731-55-8

Content (W/W): >= 80.0 - <= 100.0%

Synonym: Disulfurous acid dipotassium salt

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Sodium metabisulfite  
CAS Number: 7681-57-4  
Content (W/W):  $\geq 0.5$  -  $< 5.0\%$   
Synonym: Disulfurous acid disodium salt; Disodium disulfite

The actual concentration is withheld as a trade secret.

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## 4. First-Aid Measures

### Description of 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.

#### If on skin:

Wash thoroughly with soap and water

If irritation develops, seek medical attention.

#### If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

#### If swallowed:

Rinse mouth and then drink 200-300 ml of water. If symptoms persist, seek medical advice.

### Most important symptoms and effects, both acute and delayed

Symptoms: Overexposure may cause: corneal injury, skin corrosion, severe pain, coughing, respiratory disorders, dyspnea, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps  
Hazards: Risk of sulfur dioxide formation by reaction with gastric acid after swallowing.

### Indication of any immediate medical attention and special treatment needed

#### Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

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## 5. Fire-Fighting Measures

### Extinguishing media

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

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Unsuitable extinguishing media for safety reasons:  
water jet

Additional information:  
Product will not burn.

Use extinguishing measures to suit surroundings.

### Special hazards arising from the substance or mixture

Hazards during fire-fighting:

Sulphur dioxide,

The substances/groups of substances mentioned can be released if the product is involved in a fire.

### Advice for fire-fighters

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

### 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.

### Impact Sensitivity:

Remarks: Based on the chemical structure there is no shock-sensitivity.

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## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

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 and material for containment and cleaning up

Sweep/shovel up. Dispose of absorbed material in accordance with regulations.

Avoid raising dust.

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## 7. Handling and Storage

### Precautions for safe 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.

### Conditions for safe storage, including any incompatibilities

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

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Suitable materials for containers: Stainless steel 1.4571, Stainless steel 1.4541, Low density polyethylene (LDPE), High density polyethylene (HDPE), Carbon steel (Iron), rubberized, Polyester resin, glass reinforced (Palatal A410)

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/Personal Protection

#### Components with occupational exposure limits

Sodium metabisulfite      ACGIH, US:      TWA value 5 mg/m<sup>3</sup> ;

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

Sulphur dioxide      ACGIH, US:      STEL value 0.25 ppm ;  
                                 OSHA Z1:      PEL 5 ppm 13 mg/m<sup>3</sup> ;  
                                 NIO ID, US:      IDLH 100 ppm ; IDLH values based on the  
                                 1994 Revised Criteria

#### **Advice on system design:**

Provide local exhaust ventilation to control dust.

#### Personal protective equipment

##### **Respiratory protection:**

Wear a NIOSH-certified acid gas/organic vapour/particulate respirator. Do not exceed the maximum use concentration for the respirator facepiece/cartridge combination. For emergency or non-routine, high exposure situations, use a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Observe OSHA regulations for respirator use (29 CFR 1910.134).

##### **Hand protection:**

Chemical resistant protective gloves should be worn to prevent all skin contact., Suitable materials may include, nitrile rubber (Buna N), chloroprene rubber (Neoprene), polyvinylchloride (Pylox), Consult with glove manufacturer for testing data., Protective glove selection must be based on the user's assessment of the workplace hazards.

##### **Eye protection:**

Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

##### **Body protection:**

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

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### General safety and hygiene measures:

Eye wash fountains and safety showers must be easily accessible. Wear protective clothing as necessary to prevent contact. Hands and/or face should be washed before breaks and at the end of the shift. Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and Chemical Properties

Physical state:	solid
Form:	powder
Odour:	faint odour, of sulfur dioxide
Odour threshold:	Not determined due to potential health hazard by inhalation.
Colour:	white
pH value:	3.8 - 4.6 ( 5 %(m), 20 °C) No data available.
decomposition point:	approx. 150 °C Literature data.
Melting point:	The substance / product decomposes therefore not determined.
Freezing point:	No data available.
Boiling point:	( 1,013 hPa) not applicable
Sublimation point:	No data available.
Flash point:	not applicable, the product is a solid
Flammability:	not flammable not self-igniting (other)
Lower explosion limit:	For solids not relevant for classification and labelling.
Upper explosion limit:	For solids not relevant for classification and labelling.
Autoignition:	No data available.
Vapour pressure:	not applicable
Density:	2.3 g/cm <sup>3</sup> ( 20 °C) Literature data.
Relative density:	2.3 ( 20 °C)
Bulk density:	1,100 - 1,300 kg/m <sup>3</sup>
Partitioning coefficient n-octanol/water (log Pow):	not applicable
Self-ignition temperature:	not self-igniting
Thermal decomposition:	not self-igniting > 150 °C To avoid thermal decomposition, do not overheat.
Viscosity, dynamic:	not applicable
Viscosity, kinematic:	not applicable, the product is a solid
Solubility in water:	495 g/l ( 25 °C) Literature data.
Solubility (quantitative):	No data available.
Solubility (qualitative):	No data available.
Molecular weight:	No data available.
Evaporation rate:	The product is a non-volatile solid.

### Particle characteristics

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Particle size distribution:	65 µm	(D10, ISO 13320-1)
	228 µm	(D50, ISO 13320-1)
	523 µm	(D90, ISO 13320-1)
Particle size distribution:	fine particles	
Specific Surface Area:	4.6 m <sup>2</sup> /g	(MSSA, ISO 9227)
	10.8 m <sup>2</sup> /cm <sup>3</sup>	(VSSA, derived from BET)

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## 10. Stability and Reactivity

### Reactivity

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

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

### Chemical stability

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

### Possibility of 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.

### Conditions to avoid

Avoid humidity.

### Incompatible materials

nitrites, nitrates, oxidizing agents, acids

### Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: Sulphur dioxide

Thermal decomposition:

> 150 °C

To avoid thermal decomposition, do not overheat.

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## 11. Toxicological information

### Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

### Acute Toxicity/Effects

#### Acute toxicity

Assessment of acute toxicity: Of low 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.

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### Oral

Type of value: LD50

Species: rat (male/female)

Value: approx. 2,300 mg/kg (similar to OECD guideline 401)

### Inhalation

Type of value: LC50

Species: rat (male/female)

Value: > 5.5 mg/l (OECD Guideline 403)

Exposure time: 4 h

Tested as dust aerosol.

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Dermal

Type of value: LD50

Species: rat (male/female)

Value: > 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 other acute effects

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

### Irritation / corrosion

Assessment of irritating effects: Causes serious eye damage. Causes skin irritation.

### Skin

Species: rabbit

Result: non-irritant

Method: BASF-Test

Species: In vitro assay

Result: Irritant.

Method: OECD Guideline 439

Species: In vitro assay

Result: Non corrosive.

Method: OECD Guideline 435

### Eye

Species: rabbit

Result: irreversible damage

Method: OECD Guideline 405

### Sensitization

Assessment of sensitization: Skin sensitizing effects were not observed in animal studies. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. A sensitizing effect on particularly sensitive individuals cannot be excluded.

Mouse Local Lymph Node Assay (LLNA)

Species: mouse

Result: Non-sensitizing.



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Method: OECD Guideline 429

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Aspiration Hazard

not applicable

## **Chronic Toxicity/Effects**

### Repeated dose toxicity

Assessment of repeated dose toxicity: No known chronic effects.

### Genetic toxicity

Assessment of mutagenicity: No mutagenic effect was found in various tests with bacteria and mammalian cell culture. The substance was not mutagenic in a test with mammals. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Carcinogenicity

Assessment of carcinogenicity: In long-term animal studies in which the substance was given in the drinking water in high doses, 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. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Teratogenicity

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

### Experiences in humans

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

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## **12. Ecological Information**

### **Toxicity**

#### Aquatic toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms.

#### Toxicity to fish

LC50 (96 h) 316 mg/l, *Leuciscus idus* (DIN 38412 Part 15, static)

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. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

EC50 (48 h) 230 mg/l, *Daphnia magna* (other, 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.

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### Aquatic plants

EC50 (72 h) 43.8 mg/l (growth rate), *Scenedesmus subspicatus* (Algal growth inhibition test, static) Nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

EC50 (72 h) > 100 mg/l (growth rate), *Pseudokirchneriella subcapitata* (OECD Guideline 201, static) Nominal concentration. 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 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.

### Chronic toxicity to aquatic invertebrates

No observed effect concentration (21 d) > 10 mg/l, *Daphnia magna* (OECD Guideline 211, semistatic)

Nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Assessment of terrestrial toxicity

No data available.

Study does not need to be conducted.

## **Microorganisms/Effect on activated sludge**

### Toxicity to microorganisms

OECD Guideline 209 aquatic

activated sludge of a predominantly domestic sewage/No observed effect concentration (180 min): >= 1,000 mg/l

Nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

## **Persistence and degradability**

### Assessment biodegradation and elimination (H<sub>2</sub>O)

Inorganic product which cannot be eliminated from water by biological purification processes.

Study scientifically not justified.

### Elimination information

Study scientifically not justified.

### Assessment of stability in water

According to structural properties, hydrolysis is not expected/probable.

Study scientifically not justified.

### Information on Stability in Water (Hydrolysis)

Study scientifically not justified.

## **Bioaccumulative potential**

### Assessment bioaccumulation potential

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Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

### Bioaccumulation potential

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

### **Mobility in soil**

#### Assessment transport between environmental compartments

The substance will not evaporate into the atmosphere from the water surface.

Study scientifically not justified.

Adsorption to solid soil phase is not expected.

Study scientifically not justified.

### **Additional information**

#### Sum parameter

Chemical oxygen demand (COD): (calculated) approx. 140 mg/g

Other ecotoxicological advice:

Higher concentrations of the substance may cause a strong chemical oxygen consumption in biological sewage-treatment plants and/or waterways. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

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## 13. Disposal considerations

### **Waste disposal of substance:**

Dispose of in accordance with national, state and local regulations. Do not discharge into drains/surface waters/groundwater.

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## 14. Transport Information

### **Land transport**

USDOT

Not classified as a dangerous good under transport regulations

### **Sea transport**

IMDG

Not classified as a dangerous good under transport regulations

### **Air transport**

IATA/ICAO

Not classified as a dangerous good under transport regulations

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## 15. Regulatory Information

### **Federal Regulations**

**Registration status:**

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Food TSCA, US released / exempt

Chemical TSCA, US released / listed

**EPCRA 311/312 (Hazard categories):** Refer to SDS section 2 for GHS hazard classes applicable for this product.

### State regulations

<u>State RTK</u>	<u>CAS Number</u>	<u>Chemical name</u>
NJ	7681-57-4	Sodium metabisulfite
PA	7681-57-4	Sodium metabisulfite

### **NFPA Hazard codes:**

Health: 3 Fire: 0 Reactivity: 0 Special:

### Assessment of the hazard classes according to UN GHS criteria (most recent version):

Eye Dam.	1	Serious eye damage
Acute Tox.	5 (oral)	Acute toxicity
Aquatic Acute	3	Hazardous to the aquatic environment - acute
Skin Irrit.	2	Skin irritation

## 16. Other Information

### **SDS Prepared by:**

BASF NA Product Regulations

SDS Prepared on: 2025/08/15

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO

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