

# Safety data sheet

## Potassium Metabisulfite food grade (E224)

Revision date : 2005/11/11  
Version: 2.1

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(30042359/MDS\_GEN\_US/EN)

### 1. Substance/preparation and company identification

Company

BASF CORPORATION  
100 Campus Drive  
Florham Park, NJ 07932

24 Hour Emergency Response Information

CHEMTREC: (800) 424-9300  
BASF HOTLINE: (800) 832-HELP

Molecular formula:

K(2)S(2)O(5)

Synonyms:

POTASSIUM METABISULFITE FOOD GRADE

### 2. Composition/information on ingredients

CAS Number

16731-55-8

7681-57-4

Content (W/W)

>= 98.0 %

<= 2.0 %

Chemical name

dipotassium disulphite

Sodium metabisulfite

### 3. Hazard identification

Emergency overview

WARNING: RISK OF SERIOUS DAMAGE TO EYES.

May cause sensitization by skin contact.

May cause sensitization by inhalation.

INGESTION MAY CAUSE GASTRIC DISTURBANCES.

Avoid contact with the skin, eyes and clothing.

Avoid inhalation of dusts.

Use with local exhaust ventilation.

Wear a NIOSH-certified (or equivalent) particulate respirator.

Wear NIOSH-certified chemical goggles.

Wear chemical resistant protective gloves.

Wear protective clothing.

Eye wash fountains and safety showers must be easily accessible.

Potential health effects

**Primary routes of exposure**

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

**Acute toxicity:**

Virtually nontoxic after a single ingestion. Inhalation-risk test (IRT): No mortality within 8 hours as shown in animal studies. The inhalation of a highly saturated vapor-air mixture represents no acute hazard.

**Irritation:**

Risk of serious damage to eyes. Ingestion may cause irritation of the gastrointestinal tract.

**Sensitization:**

A sensitizing effect on particularly sensitive individuals cannot be excluded.

**Repeated dose toxicity:**

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No known chronic effects.

### Potential environmental effects

#### **Aquatic toxicity:**

Acutely harmful for aquatic organisms.

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## 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 inhale corticosteroid dose aerosol.

#### **If on skin:**

Wash thoroughly with soap and water.

If irritation develops, seek medical attention.

#### **If in eyes:**

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

#### **If swallowed:**

Rinse mouth and then drink plenty of water. If symptoms persist, seek medical advice.

#### **Note to physician**

Hazards: Risk of sulfur dioxide formation by reaction with gastric acid after swallowing.

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## 5. Fire-fighting measures

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#### **Suitable extinguishing media:**

foam

#### **Hazards during fire-fighting:**

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

#### **Protective equipment for fire-fighting:**

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

#### **Further information:**

Contaminated extinguishing water must be disposed of in accordance with official regulations. In case of fire and/or explosion do not breathe fumes.

#### **NFPA Hazard codes:**

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Health : 2      Fire: 0      Reactivity: 0      Special:

### 6. Accidental release measures

**Personal precautions:**

Use personal protective clothing. Ensure adequate ventilation. Avoid dust formation. Avoid contact with eyes.

**Environmental precautions:**

Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

**Cleanup:**

Sweep/shovel up. Correctly dispose of recovered product immediately.

Avoid raising dust.

### 7. Handling and storage

**Handling****General advice:**

Use only in well-ventilated areas. Avoid dust formation.

**Protection against fire and explosion:**

The substance/product is non-combustible. No special precautions necessary.

**Storage****General advice:**

Keep in a cool place. Keep container dry. Keep container in a well-ventilated place.

**Storage incompatibility:**

General: Segregate from acids and acid forming substances. Segregate from oxidants.  
Specific: Sodium nitrate, sodium nitrite, sodium sulfide,

### 8. Exposure controls and personal protection

**Components with workplace control parameters**

Sodium metabisulfite

ACGIH      TWA value 5 mg/m<sup>3</sup> ;

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

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**Hand protection:**

Wear chemical resistant protective gloves., Consult with glove manufacturer for testing data.

**Eye protection:**

Tightly fitting safety goggles (chemical goggles).

**Body protection:**

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

**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

Form:	powder	
Odour:	faint odour, of sulfur dioxide	
Colour:	white	
pH value:	3.8 - 4.6	( 5 %(m))
decomposition point:	150 °C	
Vapour pressure:		The vapour pressure of the aqueous solution consists of the partial pressure for water and the partial pressure for sulphur dioxide.
Bulk density:	1,100 - 1,300 kg/m <sup>3</sup>	
Partitioning coefficient n-octanol/water (log Pow):	-4	( 25 °C) (OECD Guideline 107)
Solubility in water:	450 g/l	( 20 °C)

### 10. Stability and reactivity

**Conditions to avoid:**

No data available.

**Substances to avoid:**

acids, oxidizing agent, nitrites, nitrates, sulfides

**Hazardous reactions:**

Reacts with nitrites. Reacts with nitrates. Reacts with oxidizing agents.

**Decomposition products:**

Hazardous decomposition products: Sulphur dioxide

**Thermal decomposition:**

> 150 °C

To avoid thermal decomposition, do not overheat.

### 11. Toxicological information

**Acute toxicity**

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**Oral:**

LD50/rat: 2,300 mg/kg (BASF-Test)

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**Inhalation:**

rat: / 8 h(BASF-Test)

Inhalation-risk test (IRT): No mortality within 8 hours as shown in animal studies. The inhalation of a highly saturated vapor-air mixture represents no acute hazard.

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**Skin irritation:**

rabbit: non-irritant (BASF-Test)

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**Eye irritation :**

rabbit: Risk of serious damage to eyes. (OECD Guideline 405)

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**Chronic toxicity****Genetic toxicity:**

In the majority of studies performed with microorganisms and in mammalian cell culture, a mutagenic effect was not found. A mutagenic effect was also not observed in in vivo tests.

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**Reproductive toxicity:**

The results of animal studies gave no indication of a fertility impairing effect.

**Developmental toxicity/teratogenicity:**

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

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## 12. Ecological information

**Environmental fate and transport****Biodegradation:**

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

**Bioaccumulation:**

No significant accumulation in organisms is expected as a result of the distribution coefficient of n-octanol/water (log Pow).

**Chemical oxygen demand (COD):**

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(calculated) approx. 140 mg/g

### Environmental toxicity

**Acute and prolonged toxicity to fish:**  
OECD 203; ISO 7346; 84/449/EEC, C.1 static  
zebra fish/LC50 (96 h): 460 - 1,000 mg/l  
See user defined text.

**Acute toxicity to aquatic invertebrates:**  
Directive 79/831/EEC static  
Daphnia magna/EC50 (48 h): 88.8 mg/l  
The product has not been tested. The statement has been derived from the properties of the hydrolysis products.

**Toxicity to aquatic plants:**  
other static  
green algae/EC50 (72 h): 48.1 mg/l  
The product has not been tested. The statement has been derived from the properties of the hydrolysis products.

**Toxicity to microorganisms:**  
DIN 38412 Part 8 aquatic  
Bacteria/EC10 (17 h): 32 mg/l

**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

Reference Bill of Lading

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## 15. Regulatory information

### Federal Regulations

**Registration status:**  
TSCA, US released / listed

**OSHA hazard category:** Skin and/or eye irritant, Sensitizer

**SARA hazard categories (EPCRA 311/312):** Acute

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### State regulations

#### State RTK

CAS Number  
7681-57-4

Chemical name  
Sodium metabisulfite

State RTK  
MA, NJ, PA

## 16. Other information

### HMIS III rating

Health: 2      Flammability: 0      Physical hazard: 0

HMIS uses a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates high hazard.

### Local contact information

prod\_reg@basf.com

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