1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product identifier: Potassium Metabisulphite food grade (E224)
Chemical name: Dipotassium Disulphite; Potassium Metabisulphite
CAS Number: 16731-55-8
REACH registration number: 01-2119537422-45-0001

Relevant identified uses of the substance or mixture and uses advised against:
Relevant identified uses: Food additive(s)
Recommended use: Inorganic reducing agents, initial product for chemical syntheses, food additive(s).
For the detailed identified uses of the product see appendix of the safety data sheet.

Company name: Nexchem Ltd
Unit 3 Barshaw Park
Leycroft Road
Leicester
LE4 1ET
Tel: 0116 2311130
24/7 Emergency Tel: 0800 246 1274
Email: sales@nexchem.co.uk

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:
According to Regulation (EC) No 1272/2008 [CLP]:
Eye Dam./Irrit. 1
According to Directive 67/548/EEC or 1999/45/EC:
Possible Hazards: Risk of serious damage to eyes.
Contact with acids liberates toxic gas.
For the classifications not written out in full in this section the full text can be found in section 16.

Label elements:
Globally Harmonized System, EU (GHS):
Pictogram:

Signal Word: Danger

[cont…]

Hazard Statement: H318 Causes serious eye damage.

Precautionary Statements (Prevention): P280d Wear eye/face protection.

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 doctor/physician.

Labelling of special preparations (GHS): Contact with acids liberates toxic gas.

According to Regulation (EC) No 1272/2008 [CLP]:
Hazard determining component(s) for labelling: Dipotassium Disulphite

According to Directive 67/548/EEC or 1999/45/EC:
As in Annex VI of Directive 67/548/EEC

Hazard symbol(s):

Xi Irritant.

R-phrase(s):
R41 Risk of serious damage to eyes.
R31 Contact with acids liberates toxic gas.

S-phrase(s):
S39 Wear eye/face protection.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Self-classification:
Hazard determining component(s) for labelling: Dipotassium Disulphite

Other hazards:
According to Regulation (EC) No 1272/2008 [CLP]:
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.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances
Chemical nature: Dipotassium Disulphite
CAS Number: 16731-55-8
EC-Number: 240-795-3

[cont…]

For the classifications not written out in full in this section, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, the full text is listed in section 16.

Mixtures: Not applicable

4. FIRST AID MEASURES

Description of first aid measures: 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.

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: Rinse mouth and then drink plenty of water.

Most important symptoms and effects, both acute and delayed:

Symptoms: Allergic symptoms

Hazards: Risk of Sulphur Dioxide formation by reaction with gastric acid after swallowing.

Indication of any immediate medical attention and special treatment needed:

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

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Foam

Special hazards arising from the substance or mixture: Sulphur Dioxide

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

Advice for fire-fighters:

Special protective equipment: Wear a self-contained breathing apparatus.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

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.

[cont…]

Methods and material for containment and cleaning up: Sweep/shovel up. Correctly dispose of recovered product immediately.

Reference to other sections: Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling: Use only in well-ventilated areas. Avoid dust formation.

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.

Do not store with: Sodium nitrate, sodium nitrite, disodium sulphide; sodium sulphide

Further information on storage conditions: Keep in a cool place. Keep container dry. Keep container in a well-ventilated place.

Specific end use(s): See exposure scenario(s) in the attachment to this safety data sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters: Components with occupational exposure limits

7446-09-5: Sulphur Dioxide

PNEC: Freshwater: 1.17 mg/l
Marine water: 0.12 mg/l
Sediment (freshwater): Exposure of sediment is not expected
Sediment (marine water): Exposure of sediment is not expected

STP: 88.1 mg/l

DNEL:

Worker: Long-term exposure- systemic effects, Inhalation: 263 mg/m3

Consumer: Long-term exposure- systemic effects, Inhalation: 78 mg/m3

Consumer: Long-term exposure- systemic effects, oral: 10 mg/kg

Worker: Inhalation
The nuisance dust limit (inhalativ fraction) was used as basis for the DNEL.

Exposure controls:

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 breathable aerosols/dust are formed. Combination filter for gases/vapours of organic, inorganic, acid inorganic, alkaline compounds and toxic particles (e. g. EN 14387 Type ABEK-P3).

[cont…]

Hand protection: Chemical resistant protective gloves (EN 374).
Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (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)

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

Information on basic physical and chemical properties:

Form: Powder
Colour: White
Odour: Faint odour, of Sulphur Dioxide
pH value: 3.8 - 4.6 (5 %(m))
Decomposition point: 150 °C
Density: 2.34 g/cm3
Relative density: 2.3 (20 °C)
Solubility in water: Hydrolyzes approx. 450 g/l (20 °C)
Partitioning coefficient n-octanol/water (log Kow): Not applicable
Thermal decomposition: > 150 °C
To avoid thermal decomposition, do not overheat.
Viscosity, dynamic: Not applicable

Other information:
Bulk density: 1,100 - 1,300 kg/m3
pKA: Not applicable

10. STABILITY AND REACTIVITY

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

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.

[cont…]

Conditions to avoid: Avoid humidity.

Incompatible materials:

Substances to avoid: Acids, oxidizing agents, nitrites, nitrates, sulphides.

Hazardous decomposition products: Sulphur Dioxide

11. TOXICOLOGICAL INFORMATION

Information on toxicological 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.

Experimental/calculated data: LD50 rat (oral): approx. 2,300 mg/kg (BASF-Test)
LC50 rat (by inhalation): > 5.5 mg/l 4 h (OECD Guideline 403)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Tested as dust aerosol.
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.

Irritation:

Assessment of irritating effects: Risk of serious damage to eyes. Not irritating to the skin.

Experimental/calculated data: Skin corrosion/irritation rabbit: non-irritant (BASF-Test)
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. 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.

Experimental/calculated data: Mouse Local Lymph Node Assay (LLNA) mouse: Non-sensitizing. (OECD Guideline 429)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

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 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.

[cont…]

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.

Developmental toxicity:

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

Specific target organ toxicity (single exposure):

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

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

Assessment of repeated dose toxicity: No substance-specific organ toxicity was observed after repeated administration to animals. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aspiration hazard: Not applicable

12. ECOLOGICAL INFORMATION

Toxicity:

Assessment of aquatic toxicity:

Acutely harmful for aquatic organisms.

Toxicity to fish: LC50 (96 h) 460 - 1000 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 84/449/EEC, C.1, static) Nominal concentration.

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.

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.

Microorganisms/Effect on activated sludge: No observed effect concentration (180 min) >= 1,000 mg/l, (OECD Guideline 209, aquatic) 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: Study does not need to be conducted.

[cont…]

Persistence and degradability:

Assessment biodegradation and elimination (H2O):

Inorganic product which cannot be eliminated from water by biological purification processes.
Study scientifically not justified.

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

Bioaccumulative potential

Assessment 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.

Results of PBT and vPvB assessment:

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not fulfil the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative). Self-classification.

Other adverse effects: The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

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.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods: Contact manufacturer regarding recycling.
Contact waste centre regarding recycling.
Must be disposed of or incinerated in accordance with local regulations.

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

[cont…]

14. TRANSPORT INFORMATION

Land transport:

ADR: Not classified as a dangerous good under transport regulations
UN 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

RID: Not classified as a dangerous good under transport regulations
UN 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

Inland waterway transport:

ADN: Not classified as a dangerous good under transport regulations
UN 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
Transport in inland waterway vessel: Not evaluated

Sea transport:

IMDG: Not classified as a dangerous good under transport regulations
UN 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

Air transport:

IATA/ICAO: Not classified as a dangerous good under transport regulations
UN 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

[cont…]

UN number: See corresponding entries for “UN number” for the respective regulations in the tables above.

UN proper shipping name: See corresponding entries for “UN proper shipping name” for the respective regulations in the tables above.

Transport hazard class(es): See corresponding entries for “Transport hazard class(es)” for the respective regulations in the tables above.

Packing group: See corresponding entries for “Packing group” for the respective regulations in the tables above.

Environmental hazards: See corresponding entries for “Environmental hazards” for the respective regulations in the tables above.

Special precautions for user: See corresponding entries for “Special precautions for user” for the respective regulations in the tables above.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:

Regulation: Not evaluated
Shipment approved: Not evaluated
Pollution name: Not evaluated
Pollution category: Not evaluated
Ship Type: Not evaluated

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

Chemical Safety Assessment: Chemical Safety Assessment performed

Note: The regulatory information given above only indicates the principal regulations specifically Applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

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

Eye Dam./Irrit. 1
Acute Tox. 5 (oral)
Aquatic Acute 3

Any other intended applications should be discussed with the manufacturer.

[cont…]

Full text of the classifications, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, if mentioned in section 2 or 3:

Eye Dam./Irrit. Serious eye damage/eye irritation

Legal disclaimer:

The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.