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

Product Identifier:

Chemical Name (EINECS): Sodium Metabisulphite

CAS Number: 7681-57-4

EINECS Number: 231-673-0

Index 67/548/EEC: 016-063-00-2

REACH Registration Number: 01-2119531326-45-XXXX

Relevant identified uses of the substance or mixture and uses advised against

Identified use(s): Food additive(s), inorganic reducing agent, initial product for chemical syntheses, process chemical.

Uses advised against: No information given.

Details of the supplier 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 GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567:

Warning, Acute Tox. 4 (oral): H302 Harmful if swallowed.
Danger, Eye Dam. 1: H318 Causes serious eye damage.

Adverse physicochemical, human health and environmental effects: No other hazards

Label elements:

According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567:

Pictogram:

Signal Word: Danger

[cont…]

Hazard Statements: H302: Harmful if swallowed.
H318: Causes serious eye damage.

Precautionary Statements: P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P310: Immediately call a POISON CENTRE or physician.
P301 + P330: IF SWALLOWED: Rinse mouth.

Special Provisions: EUHO31: Contact with acids liberates toxic gas.

Other Hazards: According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567.
No specific dangers known, if the regulations/notes for storage and handling are considered.
The product does not contain a substance above legal limits fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances:

Identification of the substance:

Chemical characterisation: SODIUM METABISULPHITE

CAS number: 7681-57-4

EC number: 231-673-0

REACH number: 01-2119531326-45-XXXX

Na2S2O5

E 223

Quantity	Name	Identification Numbers	Classification
>=95 % - <=100%	Sodium Metabisulphite	Index No. 016-063-00-2 CAS No. 7681-57-4 EC No. 231-673-0 REACH 01-2119531326-45-XXXX	3.3/1 Eye Dam. 1 H318 3.1/4/Oral Acute Tox. 4 H302 EUH031

Mixtures: N.A.

4. FIRST AID MEASURES

Description of first aid measures:

Inhalation: 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.

Skin contact: Immediately take off all contaminated clothing. After contact with skin, wash immediately with soap and plenty of water. In case of persistent skin irritation consult a doctor.

Eye contact: Irrigate eyes with copious amounts of water for at least 10-15 min, holding eyelids apart to ensure thorough rinsing Protect uninjured eye. OBTAIN IMMEDIATE MEDICAL ATTENTION.

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

[cont…]

Most import symptoms and effects, both acute and delayed:

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labelling 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 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: Use dry chemical, CO2, water spray, (fog) or foam According to the materials involved in the fire.

Unsuitable extinguishing media: Water jet

Additional information: Product will not burn.
Use extinguishing measures to suit surroundings.

Special hazards arising from the substance or mixture:

Endangering substances: Sulphur dioxide

Advice: 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 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, 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.

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

[cont…]

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.

Suitable materials for containers: Rubberised, 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.

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:

The nuisance dust limit value is to be kept. The substance mentioned develops if the regulation/notes for storage and handling are not observed.

7446-09-6: Sulphur dioxide: TWA value 1.3 mg/m3; 0.5 ppm (WEL/EH 40 (UK))
STEL value 2.7 mg/m3; 1 ppm (WEL/EH 40 (UK))
STEL value 2.7 mg/m3; 1 ppm (WEL/EH 40 (UK))
Ceiling limit value/factor: 15 min
TWA value 1.3 mg/m3; 0.5 ppm (EU SCOEL)
Ceiling limit value/factor: 8HR
TWA value 2.7 mg/m3; 1.0 ppm (EU SCOEL)
Ceiling limit value/factor: 15 min

7681-57-4: Sodium metabisulphite: TWA value 5 mg/m3 (WEL/EH 40 (UK))

DNEL Exposure Limit Values:

Worker Industry: 225 mg/m3	Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Consumer: 66 mg/m3	Exposure: Human Inhalation - Frequency: Long Term, local effects
Consumer: 8.6 mg/kg	Exposure: Human Oral - Frequency: Long Term, local effects

PNEC Exposure Limit Values:

Target:	Fresh Water - Value: 1 mg/l
Target:	Marine water - Value: 0.1 mg/l
Target:	Microorganisms in sewage treatments - Value: 75.4 mg/l

[cont…]

Exposure controls:

Personal protective equipment

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).

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).

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

Hand protection: Chemical resistant protective gloves (EN ISO 374-1).
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.

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, crystalline
Colour:	White to slightly yellow
Odour:	Faint odour, of sulphur dioxide
Odour threshold:	Not determined due to potential health hazard by inhalation
pH value (pH meter):	4.0 – 4.8 (5 %(m), 20°C)
Melting point:	>150°C. The substance / product decomposes.
Boiling point:	The substance/ product decomposes therefore note determined.
Flash point:	Not applicable, the product is a solid.
Evaporation rate:	The product is a non-volatile solid.
Flammability:	Not flammable
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
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 (OECD Guideline 109)
Relative vapour density (air):	The product is a non-volatile solid.

[cont…]

Solubility in water: Literature data. 667 g/l. (25°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, the product is a solid.

Explosion hazard: Not explosive (Directive 92/69/EEC, A.14).

Fire promoting properties: Based on its structural properties the product is not classified as oxidising.

Other information:

Burning rate: 0 mm/s, 0s (Directive 92/69/EEC, A.10)

Self-heating ability: It is not a substance capable of spontaneous heating.

Bulk density: 1,000 – 1,200 kg/m3

p KA: Not applicable

Grain size distribution: 169.68 - 173.41 µm. (D50, ISO 13320-1; particle size by laser diffraction). Fine particles.
422.29 – 443.59 µm. (D90, ISO 13320-1; particle size by laser diffraction). Fine particles.
49.49 – 51.34 µm. (D10, ISO 13320-1; particle size by laser diffraction). Fine particles.

10. STABILITY AND REACTIVITY

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

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

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

Conditions to avoid: Humidity.

Incompatible materials:

Substances to avoid: Nitrites, nitrates, oxidising agents, acids

Hazardous decomposition products: Sulphur dioxide

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects: SODIUM METABISULPHITE - CAS: 7681-57-4

Acute toxicity:

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.

Experimental/calculated data: LD50 rat (oral): 1,540 mg/kg (OECD Guideline 401).
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.
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.

[cont…]

Irritation:

Experimental/calculated data:

Skin corrosion/irritation: Rabbit: non-irritant (OECD Guideline 404).

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

Respiratory or skin sensitisation:

Assessment of sensitisation: Skin sensitising effects were not observed in animal studies. A sensitising 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: No mutagenic effect was found in various tests with bacteria and mammalian cell culture. The substance was not mutagenic in studies with mammals.

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

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

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

Experience in humans: With sensitive persons it can lead to an over sensitive reaction.

STOT-single exposure: Apart from effects causing lethality, no specific target organ toxicity was observed in experimental studies.

STOT-repeated exposure: No substance-specific organ toxicity was observed after repeated administration to animals.

Aspiration hazard: Not applicable.

12. ECOLOGICAL INFORMATION

Toxicity:

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, semi-static) Nominal concentration.

Assessment of terrestrial toxicity: Study scientifically not justified.

[cont…]

Persistence and degradability:

Assessment biodegradation and elimination (H2O):

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

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

Bio accumulative potential:

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

Bioaccumulation potential: Study scientifically not justified.

Mobility in soil:

Assessment transport between environmental compartments:

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

Adsorption in soil: Adsorption to solid soil phase is not expected.

Other adverse effects: None.

Additional information:

Sum parameter:

Chemical oxygen demand (COD): (Calculated) 165 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.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods: Must be disposed of or incinerated in accordance with local regulations. Observe national and local legal requirements. The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom). This product and any uncleaned containers must be disposed of as hazardous waste in accordance with the 2005 Hazardous Waste Regulations and amendments (United Kingdom).

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

Not classified as a dangerous good under transport regulations.

UN Number: Not classified in the meaning of transport regulations.

Proper Shipping Name: Not classified in the meaning of transport regulations.

Transport hazard class: Not classified in the meaning of transport regulations.

Packing group: Not classified in the meaning of transport regulations.

Environmental: Not classified in the meaning of transport regulations.

Marine pollutant: No.

Special precautions for users: Not classified in the meaning of transport regulations.

Transport in bulk according to IMO instruments: Marine transport in bulk is not intended.

[cont…]

15. REGULATORY INFORMATION

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

Prohibitions, Restrictions and Authorisations:

Annex XVII of Regulation (EC) No 1907/2006: Number on List: 75

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

The data should be considered when making any assessment under the Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).

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

Code:	Description:
EUH031:	Contact with acids liberates toxic gas.
H302:	Harmful if swallowed.
H318:	Causes serious eye damage.

Code:	Hazard class and hazard category:	Description:
3.1/4/Oral	Acute Tox. 4 (oral)	Acute toxicity (oral), Category 4
3.3/1	Eye Dam. 1	Serious eye damage, Category 1

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.