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

Product name:	SODIUM NITRITE
Synonyms; trade names:	SOD NITRITE XTL, SODIUM NITRITE (TREATED) BSF, SODIUM NITRITE ANTICAKING.
REACH Registration number:	01-2119471836-27-XXXX
CAS-No:	7632-00-0
EU Index No:	007-010-00-4
EC No:	231-555-9

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

Identified uses: Dyes, Textiles Corrosion inhibitor. Chemical Intermediate. Food / Feed additive.
For further information, see attached Exposure Scenario.

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:

Classification (EC 1272/2008)	Physical and Chemical Hazards	Ox. Sol. 2 - H272
	Human health	Acute Tox. 3 - H301; Eye Irrit. 2 - H319
	Environment	Aquatic Acute 1 - H400

Label elements

EC No.: 231-555-9

Hazard pictogram:

Signal Word: Danger

[cont..]

Hazard Statements:
H272 May intensify fire; oxidiser.
H301 Toxic if swallowed.
H319 Causes serious eye irritation.
H400 Very toxic to aquatic life.

Precautionary Statements:
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220 Keep away from combustible materials.
P221 Take any precaution to avoid mixing with combustibles.
P264 Wash contaminated skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see medical advice on this label).
P330 Rinse mouth.
P337+P313 If eye irritation persists: Get medical advice/ attention.
P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.
P391 Collect spillage.
P405 Store locked up.
P501 Dispose of contents/ container in accordance with national regulations.

Other hazards: This substance is not classified as PBT or vPvB according to current EU criteria. Hygroscopic.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances

Product name: SODIUM NITRITE
REACH registration number: 01-2119471836-27-XXXX
EU Index No: 007-010-00-4
CAS-No: 7632-00-0
EC No: 231-555-9

4. FIRST AID MEASURES

Description of first aid measures:

Inhalation: Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse nose and mouth with water. Inhale Corticosteroid dose aerosol Get medical attention if any discomfort continues.

Ingestion: Rinse mouth thoroughly with water. Give plenty of water to drink. Induce vomiting, if person is conscious. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention immediately.

Skin contact: Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.

[cont..]

Eye contact: Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

Most important symptoms and effects, both acute and delayed:

Inhalation: Pulmonary oedema, frothy sputum.

Ingestion: Unconsciousness and convulsions can occur. May cause stomach pain or vomiting.

Eye contact: Causes serious eye irritation.

Indication of any immediate medical attention and special treatment needed:

Notes for the doctor:

Treat according to symptoms: Treat with Tolunium chloride to reverse Methaemoglobinanaemia.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Extinguish with the following media: Water spray.

Unsuitable extinguishing media: Carbon dioxide (CO2). Powder.

Special hazards arising from the substance or mixture:

Specific hazards: Oxidising.

Hazardous combustion products: Oxides of Carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Nitrous gases (NOx).

Advice for fire-fighters:

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal precautions: Follow precautions for safe handling described in this safety data sheet. Keep unnecessary and unprotected personnel away from the spillage. Provide adequate ventilation.

Environmental precautions: Very toxic to aquatic life. Avoid the spillage or runoff entering drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

Methods and material for containment and cleaning up:

Methods for cleaning up: Very toxic to aquatic life. Avoid the spillage or runoff entering drains, sewers or watercourses. Remove spillage with vacuum cleaner or collect with a shovel and broom, or similar. Collect and place in suitable waste disposal containers and seal securely.

Reference to other sections: Wear protective clothing as described in Section 8 of this safety data sheet. Collect and dispose of spillage as indicated in Section 13.

[cont..]

7. HANDLING AND STORAGE

Precautions for safe handling:

Usage precautions: Handle all packages and containers carefully to minimise spills. Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid inhalation of dust and contact with skin and eyes. Protect from moisture.

Advice on general occupational hygiene: Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Provide eyewash station and safety shower.

Conditions for safe storage, including any incompatibilities:

Storage precautions: Store in tightly closed, original container in a dry, cool and well-ventilated place. The product is not combustible but, in a fire, may release oxygen, which can increase the burning rate of flammable materials. Avoid heat, flames and other sources of ignition. Keep away from food, drink and animal feeding stuffs. Store away from the following materials: Reducing agents. Flammable/combustible materials. Oxidising materials. 2. Ammonium compounds Amines. Acids. Moisture.

Specific end use(s): The identified uses for this product are detailed in Section 1.2.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Ingredient Comments: No exposure limits known for ingredient(s).

DNEL: Industry - Inhalation; Long term systemic effects: 2 mg/m³
Industry - Inhalation; Short term systemic effects: 2 mg/m

PNEC: Fresh water; 0.0054 mg/l
Marine water; 0.00616 mg/l
Intermittent release; 0.0054 mg/l
Sediment (Freshwater); 0.0195 mg/kg
Sediment (Marine water); 0.0223 mg/kg
Soil; 0.000733 mg/kg
STP; 21 mg/l

Exposure controls:

Protective equipment:



Appropriate engineering controls: Provide adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Avoid inhalation of dust and contact with skin and eyes. Provide eyewash station and safety shower. [cont..]

Eye/face protection: Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses. Wear tight-fitting, dust-resistant, chemical splash goggles if airborne dust is generated.

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. For exposure up to 8 hours, wear gloves made of the following material: Polyvinyl chloride (PVC). Protective gloves should have a minimum thickness of 0.7 mm. Nitrile rubber. Protective gloves should have a minimum thickness of 0.4 mm. Chloroprene rubber. Protective gloves should have a minimum thickness of 0.5 mm. Butyl rubber. Protective gloves should have a minimum thickness of 0.7 mm. Fluroelastomer Protective gloves should have a minimum thickness of 0.7 mm.

Other skin and body protection: Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures: Wash at the end of each work shift and before eating, smoking and using the toilet. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Care should be taken to avoid contact with contaminants when removing contaminated clothing. Wash contaminated clothing before reuse.

Respiratory protection: Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Particulate filter, type P3.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Appearance: Crystalline powder.
Colour: White to yellow.
Odour: Slight.
Odour threshold: No information available.
pH: pH (diluted solution): 8-9 (@ 10% aq.)
Melting point (°C): 280°C.
Initial boiling point and range: No information available.
Flash point: Not applicable.
Evaporation rate: Not applicable.
Flammability (solid, gas): No information available.
Upper/lower flammability or explosive limits: No information available.
Other flammability: No information available.

[cont..]

Vapour pressure: Not applicable.
Vapour density: Not applicable.
Relative density: 2.7 @ 20°C.
Bulk density: 1100 – 1300 kg/m^3.
Solubility (ies): Soluble in water.
Partition coefficient: Scientifically unjustified.
Auto-ignition temperature: No information available.
Decomposition temperature (°C): >320°C
Viscosity: Not applicable.
Explosive properties: Not considered to be explosive.
Explosive under the influence of a flame: No information available.
Oxidising properties: May intensify fire; oxidiser.
Other information: No information available.

10. STABILITY AND REACTIVITY

Reactivity: Under normal conditions of storage and use, no hazardous reactions will occur.

Chemical stability:
Stability: Stable at normal ambient temperatures and when used as recommended.

Possibility of hazardous reactions: May intensify fire; oxidiser. The product is not combustible but, in a fire, may release oxygen, which can increase the burning rate of flammable materials.

Conditions to avoid: Protect from moisture. Avoid heat, flames and other sources of ignition.

Incompatible materials:
Materials to avoid: Avoid contact with the following materials: Reducing agents. Oxidising materials. 2. Ammonium compounds Amines. Acids. Moisture.

Hazardous decomposition products: Thermal decomposition or combustion products may include the following substances: Nitrous gases (NOx). Metal oxide(s).

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:
Acute toxicity – oral
Acute toxicity oral (LD_{50} mg/kg): 180.0
Species: Rat
Notes (oral LD_{50}): Toxic if swallowed. LD_{50} 180 mg/kg, Oral, Rat.
ATE oral (mg/kg): 180.0

Acute toxicity – dermal:
Notes (dermal LD_{50}): No specific test data are available.

[cont..]

Acute toxicity – inhalation:

Notes (inhalation LC_{50}): No specific test data are available.

Skin corrosion/irritation:

Skin corrosion/irritation: Not irritating. Rabbit OECD 404.

Serious eye damage/irritation:

Serious eye damage/irritation: Causes serious eye irritation. Rabbit OECD 405.

Respiratory sensitisation:

Respiratory sensitisation: No information available.

Skin sensitisation:

Skin sensitisation: Not sensitising.

Germ cell mutagenicity:

Genotoxicity - in vitro: Inconclusive data.

Genotoxicity - in vivo: Inconclusive data.

Carcinogenicity: There is no evidence that the product can cause cancer. Under certain conditions the substance can form nitrosamines. Nitrosamines are carcinogenic in animal studies.

Reproductive toxicity:

Reproductive toxicity – fertility: No evidence of reproductive toxicity in animal studies.

Reproductive toxicity development: No evidence of reproductive toxicity in animal studies.

Specific target organ toxicity - single exposure:

STOT - single exposure: A single exposure may cause the following adverse effects: Blood damage. (methaemoglobinanaemia)

Target organs: Blood

Specific target organ toxicity - repeated exposure:

STOT - repeated exposure: Prolonged or repeated exposure may cause the following adverse effects: Blood damage. (methaemoglobinanaemia)

Target organs: Blood

Aspiration hazard:

Aspiration hazard: Not anticipated to present an aspiration hazard, based on chemical structure.

Inhalation: Symptoms following overexposure may include the following: Nausea, vomiting. Unconsciousness and convulsions can occur. Pulmonary oedema, frothy sputum. Cyanosis (blue tissue condition - nails, lips and/or skin). Death.

[cont..]

Ingestion: Toxic if swallowed. Symptoms following overexposure may include the following: Nausea, vomiting. Unconsciousness and convulsions can occur. Cyanosis (blue tissue condition nails, lips and/or skin). Pulmonary oedema, frothy sputum. Unconsciousness, possibly death. Ingestion may cause: Blood damage. (methaemoglobinanaemia) Development of symptoms may be delayed for 24 to 48 hours. Keep affected person under observation.

Skin contact: Skin irritation should not occur when used as recommended.

Eye contact: Causes serious eye irritation.

Medical considerations: Inhale Corticosteroid dose aerosol Treat with Tolunium chloride to reverse Methaemoglobinanaemia

12. ECOLOGICAL INFORMATION

Ecotoxicity: Very toxic to aquatic life.
Toxicity: Very toxic to aquatic life.

Acute aquatic toxicity:
LE(C) $_{50}$: 0.1 < L (E) C50 ≤ 1
M factor (Acute): 1

Acute toxicity – fish: LC50, 96 hours: 0.54 – 26.3 mg/l, Onchorhynchus mykiss (Rainbow trout).
Chronic, NOEC, 31 day: 6.16 mg/l, Freshwater fish
Ictalurus punctatus / I. robustus.

Acute toxicity - aquatic invertebrates: EC_{50}, 96 hours: 4.93 mg/l, Marine water invertebrates, Freshwater invertebrates.
EC_{50}, 48 hours: 15.4 mg/l, Daphnia magna
OECD 202

Acute toxicity - aquatic plants: EC_{50}, 72 hours: > 100 mg/l, Scenedesmus subspicatus
OECD 201

Acute toxicity microorganisms: EC_{50}, 48 hours: 421 mg/l,
protozoa
EC10, 72 hours: 210 mg/l, Activated sludge
OECD 209

Chronic toxicity - aquatic invertebrates: NOEC, 80 day: 9.86 mg/l, Daphnia magna.

Persistence and degradability: The product contains mainly inorganic substances which are not biodegradable.

Bioaccumulative potential: The product is not bioaccumulating.
Partition coefficient: Scientifically unjustified.

[cont..]

Mobility in soil:

Mobility: The product is soluble in water.

Results of PBT and vPvB assessment: This substance is not classified as PBT or vPvB according to current EU criteria.

Other adverse effects: None known.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

General information: Waste is classified as hazardous waste. Do not puncture or incinerate, even when empty. Do not discharge into drains or watercourses or onto the ground. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

Disposal methods: Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14. TRANSPORT INFORMATION

UN number:

UN No. (ADR/RID/): 1500

UN No. (IMDG): 1500

UN No. (ICAO): 1500

UN No. (AND): 1500

UN proper shipping name:

Proper shipping name (ADR/RID): SODIUM NITRITE

Proper shipping name (IMDG): SODIUM NITRITE

Proper shipping name (ICAO): SODIUM NITRITE

Proper Shipping Name: SODIUM NITRITE

Transport hazard class (es):

ADR/RID Class: 5.1

ADR/RID Subsidiary risk: 6.1

ADR/RID Classification code: OT2

ADR/RID Label: 5.1

IMDG Class: 5.1

IMDG Subsidiary risk: 6.1

ICAO Class/Division: 5.1

ICAO Subsidiary risk: 6.1

ADN Class: 5.1

ADN Subsidiary risk: 6.1

[cont..]

Transport Labels:

Packing group:

ADR/RID Packing group: III

IMDG Packing group: III

ADN group: III

ICAO Packing group: III

Environmental hazards:

Environmentally Hazardous Substance/Marine Pollutant:

Special precautions for user:

IMDG Code segregation: 12. Nitrites and their mixtures.

EMS: F-A, S-Q

ADR transport category: 3

Hazard Identification number (ADR/RID): 56

Tunnel Restriction Code: (E)

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

15. REGULATORY INFORMATION

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

EU Legislation: Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Commission Regulation (EU) No 453/2010 of 20 May 2010. This product may impact SEVESO storage regulations.

Chemical safety assessment: A chemical safety assessment has been carried out.

Inventories:

EU - EINECS/ELINCS: All the ingredients are listed or exempt.

[cont..]

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

Classification abbreviations and acronyms:

Acute Tox. = Acute toxicity.
Aquatic Acute = Hazardous to the aquatic environment (acute).
Aquatic Chronic = Hazardous to the aquatic environment (chronic).

Hazard Statements in Full:

H272: May intensify fire; oxidiser.
H301: Toxic if swallowed.
H319: Causes serious eye irritation.
H400: Very toxic to aquatic life.

Abbreviations and acronyms used in the safety data sheet:

ATE: Acute Toxicity Estimate.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
CAS: Chemical Abstracts Service.
DNEL: Derived No Effect Level.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
Kow: Octanol-water partition coefficient.
LC_{50}: Lethal Concentration to 50 % of a test population.
LD_{50}: Lethal Dose to 50% of a test population (Median Lethal Dose).
PBT: Persistent, Bioaccumulative and Toxic substance.
PNEC: Predicted No Effect Concentration.
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
vPvB: Very Persistent and Very Bioaccumulative.
IARC: International Agency for Research on Cancer.
MARPOL 73/78: International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978.
cATpE: Converted Acute Toxicity Point Estimate.
BCF: Bioconcentration Factor.
BOD: Biochemical Oxygen Demand.
EC_{50}: 50% of maximal Effective Concentration.
LOAEC: Lowest Observed Adverse Effect Concentration.
LOAEL: Lowest Observed Adverse Effect Level.

[cont..]

NOAEC: No Observed Adverse Effect Concentration.
NOAEL: No Observed Adverse Effect Level.
NOEC: No Observed Effect Concentration.
LOEC: Lowest Observed Effect Concentration.
DMEL: Derived Minimal Effect Level.
EL50: Exposure Limit 50
hPa: Hectopascal
LL50: Lethal Loading fifty
OECD: Organisation for Economic Co-operation and Development
POW: Octanol-water partition coefficient
SCBA: self-contained breathing apparatus
STP: Sewage Treatment Plant
VOC: Volatile Organic Compounds

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.