SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Sodium nitrite for analysis, ACS

REACH Registration Number:	01-2119471836-27-XXXX
CAS No:	7632-00-0
Index No:	007-010-00-4
EC No:	231-555-9

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

Use of the substance/mixture

Laboratory chemicals
Industrial uses: Uses of substances as such or in preparations at industrial sites
Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name:	AnalytiChem GmbH	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone:	0203/5194-0	Telefax: 0203/5194-290
E-mail:	info@analytichem.de	
Contact person:	Abteilung Produktsicherheit	Telephone: 0203/5194-107/117
E-mail:	produktsicherheit@analytichem.de	
Internet:	www.analytichem.de	
Responsible Department:	Abteilung Produktsicherheit	

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

No data available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Ox. Sol. 3; H272
Acute Tox. 3; H301
Eye Irrit. 2; H319
Aquatic Acute 1; H400

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Signal word: Danger

Pictograms:

Hazard statements

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

Precautionary statements

P273	Avoid release to the environment.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308	IF exposed or concerned:
P310	Immediately call a POISON CENTER/doctor.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula: $NaNO_2$

Molecular weight: 69,00 g/mol

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7632-00-0	sodium nitrite			100 %
	231-555-9	007-010-00-4	01-2119471836-27-XXXX	
	Ox. Sol. 3, Acute Tox. 3, Eye Irrit. 2, Aquatic Acute 1; H272 H301 H319 H400			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
7632-00-0	231-555-9	sodium nitrite	100 %
	oral: LD50 = 180 mg/kg		

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No data available

After inhalation

Provide fresh air.

After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.

Remove contact lenses, if present and easy to do. Continue rinsing.

Consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water.
(Water, to which activated charcoal may be added)
Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Respiratory complaints
Cyanosis (blue coloured blood)
Unconsciousness
Narcotic effects
Gastrointestinal complaints
Vomiting
Headache
Circulatory collapse
Irritant
Methaemoglobinaemia

4.3. Indication of any immediate medical attention and special treatment needed

Give sodium sulfate as laxative (1 tablespoon in 1 glass of water).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible solids
Oxidizing
Hazardous combustion products
In case of fire may be liberated:
Nitrogen oxides (NOx)

5.3. Advice for firefighters

Avoid contact with skin, eyes and clothes.
In case of fire: Wear self-contained breathing apparatus.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Provide adequate ventilation.
Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Emergency procedures
Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

Cover drains.
Prevent spread over a wide area (e.g. by containment or oil barriers).
Collect in closed and suitable containers for disposal.
Take up carefully when dry. Take up dust-free and set down dust-free.

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Handle and open container with care.
Provide adequate ventilation.
Avoid contact with skin, eyes and clothes.
Avoid dust formation. Do not breathe dust.
Read label before use.

Advice on protection against fire and explosion

Keep away from combustible material.
May intensify fire; oxidiser.

Advice on general occupational hygiene

Take off contaminated clothing.
Wash hands before breaks and after work.
When using do not eat or drink.

Further information on handling

Take off contaminated clothing and wash it before reuse.
Wash hands before breaks and after work.
Draw up and observe skin protection programme.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed and dry.
Store in a place accessible by authorized persons only.

Hints on joint storage

Keep away from combustible material.

Further information on storage conditions

storage temperature +5°C - +30°C

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
7632-00-0	sodium nitrite			
Worker DNEL, long-term		inhalation	systemic	2 mg/m³
Worker DNEL, acute		inhalation	systemic	2 mg/m³

PNEC values

CAS No	Substance
Environmental compartment	Value
7632-00-0	sodium nitrite
Freshwater	0,005 mg/l
Freshwater (intermittent releases)	0,005 mg/l
Marine water	0,006 mg/l
Freshwater sediment	0,019 mg/kg
Marine sediment	0,022 mg/kg
Micro-organisms in sewage treatment plants (STP)	21 mg/l
Soil	0,001 mg/kg

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles.

Hand protection

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact
Trade name/designation: KCL 741 Dermatril® L
Recommended material: NBR (Nitrile rubber) 0,11 mm
Wearing time with permanent contact: > 480 min

By short-term hand contact
Trade name/designation: KCL 741 Dermatril® L
Recommended material: NBR (Nitrile rubber) 0,11 mm
Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet<(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing.
Take off immediately all contaminated clothing.
Wash hands before breaks and after work.

Respiratory protection

Respiratory protection necessary at: dust formation
Filtering device with filter or ventilator filtering device of type: P3

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid	
Colour:	white	
Odour:	odourless	
Odour threshold:	No data available	
Melting point/freezing point:		280 °C
Boiling point or initial boiling point and boiling range:		No data available
Flammability:		not determined not applicable
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Flash point:		X
Auto-ignition temperature:		No data available
Decomposition temperature:		>320 °C
pH-Value (at 20 °C):		9 (100 g/l)
Viscosity / kinematic:		No data available
Water solubility: (at 20 °C)		820 g/L

Solubility in other solvents

not determined

Dissolution rate:	No data available
Partition coefficient n-octanol/water:	No data available
Dispersion stability:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density (at 20 °C):	2,1 g/cm³
Relative density:	No data available
Bulk density:	1200 kg/m³
Relative vapour density:	not determined
Particle characteristics:	No data available

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

No data available

Sustaining combustion:	No data available

Self-ignition temperature

Solid:	not determined
Gas:	not applicable

Oxidizing properties

The product is: oxidising, Oxidising.
Oxidizing solids, Category 3

Other safety characteristics

Evaporation rate:	not determined
Solvent separation test:	No data available

Solvent content:	No data available
Solid content:	100%
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
	No data available
Viscosity / dynamic:	No data available
Flow time:	No data available

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Possibility of hazardous reactions. oxidising, Oxidising.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Combustible substance, Aluminium
Hydrazine, Amines
Reducing agent, Phenol
Ethylene oxide, Hydrochloric acid

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

In case of fire may be liberated:
SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicocinetics, metabolism and distribution

No data available

Acute toxicity

Toxic if swallowed.
Pulmonary oedema

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7632-00-0	sodium nitrite				
	oral	LD50 180 mg/kg	Rat	Am. Ind. Hyg. Assoc. J. 30, 470-476 (196	according to Thompson W.R., Bacteriol. R

Irritation and corrosivity

Causes serious eye irritation.
Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects
Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction
Based on available data, the classification criteria are not met.

STOT-single exposure
Based on available data, the classification criteria are not met.

STOT-repeated exposure
Based on available data, the classification criteria are not met.

Aspiration hazard
Based on available data, the classification criteria are not met.

Information on likely routes of exposure
No data available

Specific effects in experiment on an animal
No data available

Additional information on tests
No data available

Practical experience
No data available

11.2. Information on other hazards

Endocrine disrupting properties
No data available

Other information
No data available

Further information
Respiratory complaints
Cyanosis (blue coloured blood)
Unconsciousness
Narcotic effects
Gastrointestinal complaints
Vomiting
Headache
Circulatory collapse
Irritant
Methaemoglobinaemia

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
7632-00-0	sodium nitrite					
	Acute fish toxicity	LC50 0,54 - 26,3 mg/l	96 h	Oncorhynchus mykiss	Can. J. Fish. Aquat. Sci. 38, 387-393 (1	Method: Four series of 96h bioassays wer
	Acute algae toxicity	ErC50 > 100 mg/l	72 h	Desmodesmus subspicatus	UNEP publications (2005)	OECD Guideline 201
	Acute crustacea toxicity	EC50 15,4 mg/l	48 h	Daphnia magna	Study report (2010)	OECD Guideline 202
	Fish toxicity	NOEC 21 mg/l	29 d	Cyprinus carpio	Environmental Toxicology and Chemistry 2	OECD Guideline 210
	Crustacea toxicity	NOEC 9,86 mg/l	80 d	Penaeus monodon	Comp. Biochem. Physiol. 101C, 453-458 (1	other: APHA

12.2. Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.
No data available

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.
No data available

12.7. Other adverse effects

No data available

Further information

Avoid release to the environment.
Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
Send to a physico-chemical treatment facility under observation of official regulations.
Do not mix with other wastes.
Do not empty into drains.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: UN 1500

14.2. UN proper shipping name:	SODIUM NITRITE
14.3. Transport hazard class(es):	5.1
14.4. Packing group:	III
Hazard label:	5.1+6.1
Classification code:	OT2
Limited quantity:	5 kg
Excepted quantity:	E1
Transport category:	3
Hazard No:	56
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1500
14.2. UN proper shipping name:	SODIUM NITRITE
14.3. Transport hazard class(es):	5.1
14.4. Packing group:	III
Hazard label:	5.1+6.1
Classification code:	OT2
Special Provisions:	802
Limited quantity:	5 kg
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1500
14.2. UN proper shipping name:	SODIUM NITRITE
14.3. Transport hazard class(es):	5.1
14.4. Packing group:	III
Hazard label:	5.1+6.1
Special Provisions:	-
Limited quantity:	5 kg
Excepted quantity:	E1
EmS:	F-A, S-Q

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1500	
14.2. UN proper shipping name:	SODIUM NITRITE	
14.3. Transport hazard class(es):	5.1	
14.4. Packing group:	III	
Hazard label:	5.1+6.1	
Special Provisions:	A803	
Limited quantity Passenger:	10 kg	
Passenger LQ:	Y546	
Excepted quantity:	E1	
IATA-packing instructions - Passenger:		559
IATA-max. quantity - Passenger:		25 kg
IATA-packing instructions - Cargo:		563
IATA-max. quantity - Cargo:		100 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	Yes
Danger releasing substance:	sodium nitrite

14.6. Special precautions for user

Warning: Oxidising substances.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 75

Information according to 2012/18/EU (SEVESO III):	H2 ACUTE TOXIC
Additional information:	P8, E1

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Water hazard class (D):	3 - highly hazardous to water

SECTION 16: Other information

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
Ox. Sol: Oxidising solid
Acute Tox: Acute toxicity
Eye Irrit: Eye irritation
Aquatic Acute: Acute aquatic hazard

Relevant H and EUH statements (number and full text)

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