

Safety data sheet
according to 1907/2006/EC, Article 31

Revision: 24.05.2011

Printing date 01.07.2013

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name **Sodium nitrite**
 Stock number: 44227
 CAS Number: 7632-00-0
 EC number: 231-555-9
 Index number: 007-010-00-4

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

Identified use: SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Alfa Aesar GmbH & Co.KG
 A Johnson Matthey Company
 Zeppelinstr. 7b
 76185 Karlsruhe / Germany
 Tel: +49 (0) 721 84007 280
 Fax: +49 (0) 721 84007 300
 Email: tech@alfa.com
 www.alfa.com

Informing department:**1.4 Emergency telephone number:**

Product safety Tel + +049 (0) 7275 988687-0
 Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)
 Poison Information Center Mainz
 www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008



GHS03 flame over circle

Ox. Sol. 2 H272 May intensify fire; oxidiser.



GHS06 skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 1 H330 Fatal if inhaled.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

T; Toxic

R25: Toxic if swallowed.

O; Oxidising

R8: Contact with combustible material may cause fire.

N; Dangerous for the environment

R50: Very toxic to aquatic organisms.

Information concerning particular hazards for human and environment:

Not applicable

Other hazards that do not result in classification

No information known.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008****Hazard pictograms****Signal word****Hazard statements**

The substance is classified and labelled according to the CLP regulation.

GHS03, GHS06, GHS09

Danger

H272 May intensify fire; oxidiser.

H301 Toxic if swallowed.

H330 Fatal if inhaled.

H400 Very toxic to aquatic life.

P221 Take any precaution to avoid mixing with combustibles.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P320 Specific treatment is urgent (see on this label).

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Precautionary statements**2.3 Other hazards****Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients**3.1 Substances**

CAS# Designation: 7632-00-0 Sodium nitrite

Identification number(s):

EC number: 231-555-9

Index number: 007-010-00-4

SECTION 4: First aid measures**4.1 Description of first aid measures****General information**

Instantly remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After inhalation

Seek immediate medical advice.

Instantly wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

Rinse opened eye for several minutes under running water. Then consult doctor.

Do not induce vomiting; instantly call for medical help.

After skin contact**After eye contact****After swallowing****4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

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4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents Use carbon dioxide, extinguishing powder or foam. Water may be ineffective but may be used for cooling exposed containers.

5.2 Special hazards arising from the substance or mixture This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. If this product is involved in a fire, the following can be released:
Nitrogen oxides (NOx)
Sodium oxide

5.3 Advice for firefighters
Protective equipment: Wear self-contained breathing apparatus.
Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

6.2 Environmental precautions: Do not allow material to be released to the environment without proper governmental permits.
Do not allow product to reach sewage system or water bodies.
Do not allow to enter the ground/soil.

6.3 Methods and material for containment and cleaning up: Dispose of contaminated material as waste according to item 13.
Prevention of secondary hazards: Acts as an oxidizing agent on organic materials such as wood, paper and fats
Keep away from combustible material.

6.4 Reference to other sections See Section 7 for information on safe handling
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires: Substance/product can reduce the ignition temperature of flammable substances.
This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

7.2 Conditions for safe storage, including any incompatibilities

Storage
Requirements to be met by storerooms and containers: No special requirements.
Information about storage in one common storage facility: Store away from flammable substances.
Store away from reducing agents.
Do not store with organic materials.
Store away from metal powders.
Store away from water.

Further information about storage conditions: This product is hygroscopic.
Store under dry inert gas.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Protect from humidity and keep away from water.
Store in a locked cabinet or with access restricted to technical experts or their assistants.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters
Components with critical values that require monitoring at the workplace: Not required.
Additional information: No data

8.2 Exposure controls
Personal protective equipment
General protective and hygienic measures The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Maintain an ergonomically appropriate working environment.

Breathing equipment: Use breathing protection with high concentrations.
Protection of hands: Check protective gloves prior to each use for their proper condition.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Material of gloves Impervious gloves
Penetration time of glove material Not determined
Eye protection: Safety glasses
Body protection: Protective work clothing.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

General Information
Appearance:
Form: Crystalline
Colour: White
Smell: Odourless
Odour threshold: Not determined.

pH-value: Not applicable.

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Change in condition
Melting point/Melting range: 271 °C
Boiling point/Boiling range: 320 °C
Sublimation temperature / start: Not determined

Flash point: Not applicable
Inflammability (solid, gaseous) Contact with combustible material may cause fire.
Ignition temperature: Not determined
Decomposition temperature: Not determined
Self-inflammability: Not determined.
Critical values for explosion:
Lower: Not determined
Upper: Not determined
Steam pressure: Not applicable.
Density at 20 °C 2,168 g/cm³
Relative density Not determined.
Vapour density Not applicable.
Evaporation rate Not applicable.
Solubility in / Miscibility with
Water at 20 °C: 82 g/l
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
dynamic: Not applicable.
kinematic: Not applicable.
9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity May intensify fire; oxidiser.
10.2 Chemical stability Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.
10.3 Possibility of hazardous reactions Reacts with reducing agents
Reacts with flammable substances
10.5 Incompatible materials: Reducing agents
Flammable substances
Organic materials
Metal powders
Water/moisture
10.6 Hazardous decomposition products: Nitrogen oxides (NOx)
Sodium oxide

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral	LD50	158 mg/kg (rat)
Inhalative	LC50/4H	5,5 mg/m ³ /4H (rat)

Skin irritation or corrosion: Irritant for skin and mucous membranes.
Eye irritation or corrosion: Irritant effect.
Sensitization: No sensitizing effect known.
Germ cell mutagenicity: No effects known.
Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Reproductive toxicity: No effects known.
Specific target organ system toxicity - repeated exposure: No effects known.
Specific target organ system toxicity - single exposure: No effects known.
Aspiration hazard: No effects known.
Other information (about experimental toxicology):

Additional toxicological information:

Tumorigenic effects have been observed on tests with laboratory animals.
Reproductive effects have been observed on tests with laboratory animals.
Mutagenic effects have been observed on tests with bacteria.
Mutagenic effects have been observed on tests with fish.
Mutagenic effects have been observed with human fibroblast.
Mutagenic effects have been observed on tests with laboratory animals.
Mutagenic effects have been observed on tests with insects.
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity: No further relevant information available.
12.2 Persistence and degradability No further relevant information available.
12.3 Bioaccumulative potential No further relevant information available.
12.4 Mobility in soil No further relevant information available.

Ecotoxicological effects:
Remark: Very toxic for fish

Additional ecological information:

General notes: Do not allow material to be released to the environment without proper governmental permits.
Water danger class 3 (Self-assessment): extremely hazardous for water.
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into soil.
Also poisonous for fish and plankton in water bodies.
Avoid transfer into the environment.
Very toxic for aquatic organisms

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.
12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation Hand over to disposers of hazardous waste.

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Must be specially treated under adherence to official regulations.
Consult state, local or national regulations for proper disposal.

Uncleaned packagings:
Recommendation:

Disposal must be made according to official regulations.

SECTION 14: Transport information

UN-Number
ADR, IMDG, IATA

UN1500

14.2 UN proper shipping name
ADR
IMDG, IATA

1500 SODIUM NITRITE
SODIUM NITRITE

14.3 Transport hazard class(es)
ADR



Class
Label
IMDG, IATA

5.1 (OT2) Oxidising substances.
5.1+6.1



Class
Label

5.1 Oxidising substances.
5.1+6.1

Packing group
ADR, IMDG, IATA

III

14.5 Environmental hazards:

Environmentally hazardous substance, solid

14.6 Special precautions for user
Kemler Number:
EMS Number:
Segregation groups

Warning: Oxidising substances.
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14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC
Code

Not applicable.

Transport/Additional information:

ADR
Excepted quantities (EQ):
Limited quantities (LQ)
Transport category
Tunnel restriction code

E1
5 kg
3
E

UN "Model Regulation":

UN1500, SODIUM NITRITE, 5.1 (6.1), III

SECTION 15: Regulatory information

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

Australian Inventory of Chemical
Substances

Substance is listed.

Standard for the Uniform Scheduling of Drugs and Poisons

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S2, S5, S6

National regulations

Information about limitation of use:

Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.

Water hazard class:

Water danger class 3 (Self-assessment): extremely hazardous for water.

Other regulations, limitations and prohibitive
regulations
ELINCS (European List of Notified Chemical
Substances)

Substance is not listed.

Substances of very high concern (SVHC)
according to REACH, Article 57

Substance is not listed.

REACH - Pre-registered substances

Substance is listed.

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing data specification sheet: Health, Safety and Environmental Department.

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
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
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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