

### Safety Data Sheet acc. to OSHA HCS (HazCom 2012)

Printing date 05/06/2022

Reviewed on 05/06/2022

## 1 Identification

- **Product identifier**
- **Trade name: Nitrite-101**
- **Catalogue number:** 424314, 424314-0
- **Application of the substance / the mixture:** Reagent for water analysis
- **Manufacturer/Supplier:**  
Tintometer Inc.  
6456 Parkland Drive  
Sarasota, FL 34243  
USA  
phone: (941) 756-6410  
fax: (941) 727-9654  
www.lovibond.us  
Made in Germany
- **Emergency telephone number:** + 1 866 928 0789 (English, French, Spanish)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS07

Skin Irritation 2      H315 Causes skin irritation.  
Eye Irritation 2A      H319 Causes serious eye irritation.  
Sensitization - Skin 1      H317 May cause an allergic skin reaction.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Hazard Communication Standard (HCS).
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labeling:**  
sulphanilic acid
- **Hazard statements**  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H317 May cause an allergic skin reaction.
- **Precautionary statements**  
P261      Avoid breathing dust.  
P280      Wear protective gloves/protective clothing/eye protection.  
P305+P351+P338      If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
   Continue rinsing.  
P302+P352      If on skin: Wash with plenty of water.  
P313      Get medical advice/attention.
- **Other hazards** No further relevant information available.

# Safety Data Sheet

## acc. to OSHA HCS (HazCom 2012)

Printing date 05/06/2022

Reviewed on 05/06/2022

Trade name: Nitrite-101

(Contd. of page 1)

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** mixture of organic compounds
- **Composition and Information on Ingredients:**  
Percent ranges are used due to the confidential product information.

CAS: 124-04-9 EINECS: 204-673-3 Index number: 607-144-00-9 RTECS: AU 8400000	adipic acid ⚠ Eye Irritation 2A, H319	80–90%
CAS: 121-57-3 EINECS: 204-482-5 Index number: 612-014-00-X RTECS: WP 3895500	sulphanilic acid ⚠ Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1, H317	10–20%
CAS: 1465-25-4 EINECS: 215-981-2	N-2-aminoethyl-1-naphthylamine dihydrochloride ⚠ Skin Irritation 2, H315; Eye Irritation 2A, H319	≤2.5%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### 4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Immediately rinse with plenty of water.  
If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes (at least 15 min) under running water. Then consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink 1-2 glasses of water.  
Seek medical treatment in case of complaints.
- **Most important symptoms and effects, both acute and delayed**  
allergic reactions  
irritations  
after inhalation:  
mucosal irritations, cough, breathing difficulty  
after swallowing:  
headache  
methaemoglobinaemia  
drop in blood pressure  
cyanosis
- **Danger:** risk of skin sensitization
- **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Water, Carbon dioxide (CO<sub>2</sub>), Foam, Fire-extinguishing powder
- **For safety reasons unsuitable extinguishing agents:**  
For this substance / mixture no limitations of extinguishing agents are given.
- **Special hazards arising from the substance or mixture**  
Can burn in fire.  
Risk of dust explosion.  
Formation of toxic gases is possible during heating or in case of fire.  
In case of fire, the following can be released:  
nitrous gases  
Sulfur oxides (SO<sub>x</sub>)  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>)
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.

(Contd. on page 3)

US

# Safety Data Sheet

## acc. to OSHA HCS (HazCom 2012)

Printing date 05/06/2022

Reviewed on 05/06/2022

Trade name: Nitrite-101

(Contd. of page 2)

### Additional information

- Collect contaminated fire fighting water separately. It must not enter the sewage system.
- Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
- Ambient fire may liberate hazardous vapours.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
- **Advice for non-emergency personnel:**
  - Wear protective equipment. Keep unprotected persons away.
  - Ensure adequate ventilation
- **Advice for emergency responders:** Protective equipment: see section 8
- **Environmental precautions:** Do not allow product to reach sewage system or any water course.
- **Methods and material for containment and cleaning up:**
  - Ensure adequate ventilation.
  - Pick up mechanically.
  - Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

## 7 Handling and storage

- **Precautions for safe handling**
- **Advice on safe handling:**
  - Prevent formation of dust.
  - Protect from heat.
- **Hygiene measures:**
  - Avoid contact with the skin.
  - Avoid contact with the eyes.
  - Take off immediately all contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Do not eat, drink or smoke when using this product.
- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:**
  - Store in a cool location.
  - Unsuitable material for receptacle: steel.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
  - Protect from heat and direct sunlight.
  - Protect from exposure to the light.
  - Store in dry conditions.
  - Protect from humidity and water.
- **Recommended storage temperature:** 20°C +/- 5°C (approx. 68°F)
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
  - The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
  - At this time, the other constituents have no known exposure limits.

### CAS: 124-04-9 adipic acid

TLV (USA)	Long-term value: 5 mg/m <sup>3</sup>
EL (Canada)	Long-term value: 5 mg/m <sup>3</sup>
EV (Canada)	Long-term value: 5 mg/m <sup>3</sup>

- **Additional information:** The lists that were valid during the creation were used as basis.

(Contd. on page 4)

— US —

# Safety Data Sheet

## acc. to OSHA HCS (HazCom 2012)

Printing date 05/06/2022

Reviewed on 05/06/2022

Trade name: Nitrite-101

(Contd. of page 3)

- **Engineering measures:**  
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.
- **Personal protective equipment:**  
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
- **Breathing equipment:** Use respiratory protective device against the effects of fume/dust/aerosol.
- **Recommended filter device for short term use:** Combination filter B-P2
- **Protection of hands:**  
Protective gloves  
Preventive skin protection by use of skin-protecting agents is recommended.  
After use of gloves apply skin-cleaning agents and skin cosmetics.
- **Material of gloves**  
Nitrile rubber, NBR  
Recommended thickness of the material:  $\geq 0.11$  mm
- **Penetration time of glove material**  
Value for the permeation: Level  $\leq 1$  (10 min)  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**  
Safety glasses  
Use protective goggles that have been tested and approved in accordance with government standards (like NIOSH).
- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment:**  
Do not allow product to reach sewage system or any water course.

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **Appearance:**
- **Form / Physical state:** Powder
- **Color:** White
- **Odor:** Odorless
- **Odor threshold:** Not applicable.
- **pH-value (50 g/l) at 20°C (68°F):** 2.2
- **Melting point/freezing point:**  $>151^{\circ}\text{C}$  ( $>303.8^{\circ}\text{F}$ ) (CAS 124-04-9)
- **Initial boiling point and boiling range:** Not determined.
- **Flash point:**  $196^{\circ}\text{C}$  ( $384.8^{\circ}\text{F}$ ) (CAS 124-04-9, CAS: 124-04-9 adipic acid)
- **Flammability (solid, gas):** Not determined.
- **Ignition temperature:**  $>400^{\circ}\text{C}$  ( $>752^{\circ}\text{F}$ ) (CAS 454-57-6, CAS: 121-57-3 sulphanilic acid)
- **Decomposition temperature:**  $> 288^{\circ}\text{C}$  ( $> 550.4^{\circ}\text{F}$ ) (CAS 454-57-6)
- **Auto-ignition temperature:** Product is not self-igniting.
- **Danger of explosion:** Risk of dust explosion if enriched with fine dust in the presence of air.
- **Flammability or explosive limits:**
- **Lower:** Not determined.
- **Upper:** Not applicable (solid).
- **Oxidizing properties:** none
- **Vapor Pressure:** Not applicable (solid).
- **Density:** Not determined.
- **Relative density:** Not determined.
- **Vapor density:** Not applicable.
- **Evaporation rate:** Not applicable.
- **Solubility(ies)**
- **Water:** Partially insoluble.
- **Partition coefficient (n-octanol/water):** Not applicable (mixture).
- **Viscosity:** Not applicable.
- **Kinematic:** Not applicable (solid).
- **Other information**
- **Solids content:** 100.0 %

— US —  
(Contd. on page 5)

# Safety Data Sheet

## acc. to OSHA HCS (HazCom 2012)

Printing date 05/06/2022

Reviewed on 05/06/2022

Trade name: Nitrite-101

(Contd. of page 4)

### 10 Stability and reactivity

- **Reactivity** Dust can combine with air to form an explosive mixture.
- **Chemical stability** Stable at ambient temperature (room temperature).
- **Possibility of hazardous reactions**  
Aqueous solution reacts acidic.  
In contact with nitrites, nitrates or nitrous acid possible release of nitrosamines (carcinogenic)!  
Reacts with acids, alkalis and oxidizing agents.  
Reacts with reducing agents.
- **Conditions to avoid** strong heating
- **Incompatible materials:** steel
- **Hazardous decomposition products:** see section 5

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

#### · Acute toxicity estimate (ATE<sub>(MX)</sub>) - Calculation method:

Inhalative	GHS ATE <sub>(MX)</sub>	8.79 mg/l/4h (.) (dust/mist)
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#### · LD/LC50 values that are relevant for classification:

##### CAS: 124-04-9 adipic acid

Oral	LD50	5700 mg/kg (rat) (MERCK)
Dermal	LD50	>7940 mg/kg (rabbit) (Registrant, ECHA: no deaths occurred)

##### CAS: 121-57-3 sulphanilic acid

Oral	LD50	12300 mg/kg (rat) (IUCLID)
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#### · Primary irritant effect:

- **on the skin:** Causes skin irritation.
- **on the eye:** Causes serious eye irritation.

#### · Information on components:

##### CAS: 124-04-9 adipic acid

Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: severe irritations)

##### CAS: 121-57-3 sulphanilic acid

Irritation of skin	OECD 404	(rabbit: slight irritation) (IUCLID)
Irritation of eyes	OECD 405	(rabbit: irritation) (IUCLID)

- **Sensitization:** May cause an allergic skin reaction.

#### · Information on components:

##### CAS: 124-04-9 adipic acid

Sensitization	OECD 406	(guinea pig: negative) (IUCLID)
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##### CAS: 121-57-3 sulphanilic acid

Sensitization	OECD 406	(guinea pig: positive)
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#### · Carcinogenic categories

##### · IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

##### · NTP (National Toxicology Program)

None of the ingredients is listed.

(Contd. on page 6)

— US —

# Safety Data Sheet

## acc. to OSHA HCS (HazCom 2012)

Printing date 05/06/2022

Reviewed on 05/06/2022

Trade name: Nitrite-101

(Contd. of page 5)

<b>· OSHA-Ca (Occupational Safety &amp; Health Administration)</b>	
None of the ingredients is listed.	
<b>· Other information:</b> see section 8 / 15	
<b>· Synergistic Products:</b> None	
<b>· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):</b> The following statements refer to the mixture:	
<b>· Germ cell mutagenicity</b> Based on available data, the classification criteria are not met.	
<b>· Carcinogenicity</b> Based on available data, the classification criteria are not met.	
<b>· Reproductive toxicity</b> Based on available data, the classification criteria are not met.	
<b>· STOT (specific target organ toxicity) -single exposure</b> Based on available data, the classification criteria are not met.	
<b>· STOT (specific target organ toxicity) -repeated exposure</b> Based on available data, the classification criteria are not met.	
<b>· Aspiration hazard</b> Based on available data, the classification criteria are not met.	
<b>· Information on components:</b>	
<b>CAS: 124-04-9 adipic acid</b>	
OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames test) (IUCLID)
OECD 474	(negative) (Mammalian Erythrocyte Micronucleus Test)
<b>CAS: 121-57-3 sulphanilic acid</b>	
OECD 471	(negative) (NTP, Salmonella typhimurium)
<b>· Additional toxicological information:</b>	
The following applies to aromatic amines in general: systemic effect - methaemoglobinaemia with headache, cardia dysrhythmia, drop in blood pressure, dyspnoea, spasm, principal symptom: cyanosis (blue discoloration of the blood) Under given conditions, contact with nitrites or nitric acid can lead to the formation of nitrosamines, which have shown themselves to be carcinogenic in animal experiments.	

## 12 Ecological information

<b>· Toxicity</b>	
<b>· Aquatic toxicity:</b>	
<b>CAS: 124-04-9 adipic acid</b>	
LC50	511 mg/l/48h (gold orfe)
EC50	86 mg/l/48h (Daphnia magna) (OECD 202)
IC50	31 mg/l/72h (Desmodesmus subspicatus) (IUCLID)
LC50	97 mg/l/96h (fathhead minnow) (ECOTOX)
<b>CAS: 121-57-3 sulphanilic acid</b>	
EC50	85.7 mg/l/48h (Daphnia magna) (IUCLID)
IC50	91 mg/l/72h (Desmodesmus subspicatus) (IUCLID)
LC50	100.4 mg/l/96h (fathhead minnow) (IUCLID)
<b>· Bacterial toxicity:</b>	
<b>CAS: 124-04-9 adipic acid</b>	
EC50	92 mg/l (Pseudomonas putida) (DIN 38412) (IUCLID)
<b>· Persistence and degradability</b>	
<b>CAS: 124-04-9 adipic acid</b>	
OECD 301 B	100 % / 28 d (readily biodegradable) (CO2 Evolution Test)
<b>CAS: 121-57-3 sulphanilic acid</b>	
OECD 301 B	31 % / 28 d (not readily biodegradable) (CO2 Evolution Test)

(Contd. on page 7)

— US —

# Safety Data Sheet

## acc. to OSHA HCS (HazCom 2012)

Printing date 05/06/2022

Reviewed on 05/06/2022

Trade name: Nitrite-101

(Contd. of page 6)

- **Bioaccumulative potential**

Pow = n-octanol/wasser partition coefficient

log Pow 1-3 = Not worth-mentioning accumulating in organisms.

log Pow &lt; 1 = Does not accumulate in organisms.

<b>CAS: 124-04-9 adipic acid</b>
log Pow   0.081 (.) (25°C, OECD 107)
<b>CAS: 121-57-3 sulphanilic acid</b>
log Pow   -2.16 (.)
<b>CAS: 1465-25-4 N-2-aminoethyl-1-naphthylamine dihydrochloride</b>
log Pow   1.82 (.)

- **Mobility in soil** No further relevant information available.

- **Other adverse effects**

Harmful effect due to pH shift.

Avoid transfer into the environment.

### 13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Hand over to hazardous waste disposers.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

<b>UN-Number</b>	
<b>DOT, IMDG, IATA</b>	none
<b>UN proper shipping name</b>	
<b>DOT, IMDG, IATA</b>	none
<b>Transport hazard class(es)</b>	
<b>DOT, IMDG, IATA</b>	
<b>Class</b>	none
<b>Packing group</b>	
<b>DOT, IMDG, IATA</b>	none
<b>Environmental hazards:</b>	Not applicable.
<b>Special precautions for user</b>	Not applicable.
<b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
<b>Transport/Additional information:</b>	Not dangerous according to the above specifications.

### \*15 Regulatory information

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

- **Sara**

<b>Section 355 (Extremely hazardous substances):</b>
None of the ingredients is listed.
<b>Section 313 (Specific toxic chemical listings):</b>
None of the ingredients is listed.
<b>TSCA (Toxic Substances Control Act):</b>
All components have the value ACTIVE.

(Contd. on page 8)

# Safety Data Sheet

## acc. to OSHA HCS (HazCom 2012)

Printing date 05/06/2022

Reviewed on 05/06/2022

Trade name: Nitrite-101

(Contd. of page 7)

<b>· Hazardous Air Pollutants</b>	
None of the ingredients is listed.	
<b>· Proposition 65</b>	
<b>· Chemicals known to cause cancer:</b>	
None of the ingredients is listed.	
<b>· Chemicals known to cause reproductive toxicity for females:</b>	
None of the ingredients is listed.	
<b>· Chemicals known to cause reproductive toxicity for males:</b>	
None of the ingredients is listed.	
<b>· Chemicals known to cause developmental toxicity:</b>	
None of the ingredients is listed.	
<b>· New Jersey Right-to-Know List:</b>	
CAS: 124-04-9	adipic acid
<b>· New Jersey Special Hazardous Substance List:</b>	
None of the ingredients is listed.	
<b>· Pennsylvania Right-to-Know List:</b>	
CAS: 124-04-9	adipic acid
<b>· Pennsylvania Special Hazardous Substance List:</b>	
CAS: 124-04-9	adipic acid
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<b>· EPA (Environmental Protection Agency)</b>	
None of the ingredients is listed.	
<b>· NIOSH-Ca (National Institute for Occupational Safety and Health)</b>	
None of the ingredients is listed.	
<b>· Information about limitation of use:</b> Employment restrictions concerning young persons must be observed.	
<b>· Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out.	

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### · Relevant phrases

H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.

· **Date of preparation / last revision** 05/06/2022 / 15

### · Abbreviations and acronyms:

OECD: Organisation for Economic Co-operation and Development  
STOT: specific target organ toxicity  
SE: single exposure  
RE: repeated exposure  
EC50: half maximal effective concentration  
IC50: half maximal inhibitory concentration  
NOEL or NOEC: No Observed Effect Level or Concentration  
ACGIH® - American Conference of Governmental Industrial Hygienists  
•A1 - Confirmed human carcinogen  
•A2 - Suspected human carcinogen  
•A3 - Confirmed animal carcinogen with unknown relevance to humans  
•A4 - Not classifiable as a human carcinogen  
•A5 - Not suspected as a human carcinogen  
IARC - International Agency for Research on Cancer  
•Group 1 - Carcinogenic to humans  
•Group 2A - Probably carcinogenic to humans  
•Group 2B - Possibly carcinogenic to humans  
•Group 3 - Not classifiable as to carcinogenicity to humans  
•Group 4 - Probably not carcinogenic to humans  
NTP - National Toxicology Program, U.S. Department of Health and Human Services  
•Group K - Known to be Human Carcinogens  
•Group R - Reasonably Anticipated to be Human Carcinogens  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
EINECS: European Inventory of Existing Commercial Chemical Substances

(Contd. on page 9)



# Safety Data Sheet

acc. to OSHA HCS (HazCom 2012)

Printing date 05/06/2022

Reviewed on 05/06/2022

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**Trade name: Nitrite-101**

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(Contd. of page 8)

ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
NIOSH: National Institute for Occupational Safety  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
Skin Irritation 2: Skin corrosion/irritation – Category 2  
Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A  
Sensitization - Skin 1: Skin sensitisation – Category 1

**Sources**

Data arise from safety data sheets, reference works and literature.

ECHA: European Chemicals Agency <http://echa.europa.eu>

IUCLID (International Uniform Chemical Information Database)

ECOTOX Database

\* Data compared to the previous version altered.

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