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

1.1 Product identifiers

Product name: Nitrilotriacetic acid trisodium salt
Product Number: N0253
Brand: Sigma
Index-No.: 607-620-00-6
REACH No.: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
CAS-No.: 5064-31-3

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

Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company: Sigma-Aldrich Company Ltd.
The Old Brickyard
NEW ROAD, GILLINGHAM
Dorset
SP8 4XT
UNITED KINGDOM
Telephone: +44 (0)1747 833000
Fax: +44 (0)1747 833313
E-mail address: eurtechserv@sial.com

1.4 Emergency telephone number

Emergency Phone #: +44 (0)1747 833100

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
Acute toxicity, Oral (Category 4), H302
Eye irritation (Category 2), H319
Carcinogenicity (Category 2), H351

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC
R40
Xn Harmful
R22
Xi Irritant
R36

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008
Pictogram
Signal word: Warning

Hazard statement(s):
- H302: Harmful if swallowed.
- H319: Causes serious eye irritation.
- H351: Suspected of causing cancer.

Precautionary statement(s):
- P281: Use personal protective equipment as required.
- P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements: none

2.3 Other hazards: none

SECTION 3: Composition/information on ingredients

3.1 Substances
Synonyms: N,N-Bis(carboxymethyl)glycine (NTA), Triglycollamic acid

Formula: C_{6}H_{6}NNa_{3}O_{6}
Molecular Weight: 257.08 g/mol
CAS-No.: 5064-31-3
EC-No.: 225-768-6
Index-No.: 607-620-00-6

Hazardous ingredients according to Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>&lt;= 100 %</td>
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Hazardous ingredients according to Directive 1999/45/EC

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</tbody>
</table>

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, nitrogen oxides (NOx), Sodium oxides

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
no data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Components with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment

Eye/face protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance  Form: crystalline
b) Odour  no data available
c) Odour Threshold  no data available
d) pH  no data available
e) Melting point/freezing point  Melting point/range: 300 °C
f) Initial boiling point and boiling range  no data available
g) Flash point  no data available
h) Evaporation rate  no data available
i) Flammability (solid, gas)  no data available
j) Upper/lower flammability or explosive limits  no data available
k) Vapour pressure  no data available
l) Vapour density  no data available
m) Relative density  1.77 g/cm3 at 20 °C
n) Water solubility  ca.640 g/l at 20 °C
o) Partition coefficient: n-octanol/water  no data available
p) Auto-ignition temperature  > 200 °C at 1,013.25 hPa
q) Decomposition  no data available
SECTION 10: Stability and reactivity

10.1 Reactivity
no data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
no data available

10.4 Conditions to avoid
no data available

10.5 Incompatible materials
Strong oxidizing agents, Strong bases

10.6 Hazardous decomposition products
Other decomposition products - no data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - rat - male and female - 1,740 mg/kg
(OECD Test Guideline 401)

Skin corrosion/irritation
Skin - rabbit
Result: No skin irritation - 24 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - rabbit
Result: Irritating to eyes. - 24 h
(OECD Test Guideline 405)

Respiratory or skin sensitisation
- guinea pig
Result: Does not cause skin sensitisation.
(OECD Test Guideline 406)

Germ cell mutagenicity
Mutagenicity (micronucleus test)
mouse - male
Result: negative

Carcinogenicity
This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification. The National Cancer Institute (NCI) has found clear evidence for carcinogenicity. Found positive for carcinogenicity in EPA Genetox program.
Limited evidence of carcinogenicity in animal studies
IARC: 2B - Group 2B: Possibly carcinogenic to humans (Trisodium nitilotriacetate)

**Reproductive toxicity**
no data available

**Specific target organ toxicity - single exposure**
no data available

**Specific target organ toxicity - repeated exposure**
no data available

**Aspiration hazard**
no data available

**Additional Information**
Repeated dose toxicity - rat - male - Oral - No observed adverse effect level - 9 mg/kg
RTECS: MB8400000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**SECTION 12: Ecological information**

12.1 **Toxicity**
- Toxicity to fish: flow-through test LC50 - Pimephales promelas (fathead minnow) - 127 mg/l - 96 h
- Toxicity to daphnia and other aquatic invertebrates: static test EC50 - Daphnia magna (Water flea) - 560 - 1,000 mg/l - 48 h
- Toxicity to algae: static test EC50 - Desmodesmus subspicatus (Scenedesmus subspicatus) - > 100 mg/l - 72 h

12.2 **Persistence and degradability**
- Biodegradability: aerobic - Exposure time 28 d
  - Result: 96 % - Readily biodegradable.
  - (OECD Test Guideline 302B)

12.3 **Bioaccumulative potential**
no data available

12.4 **Mobility in soil**
no data available

12.5 **Results of PBT and vPvB assessment**
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 **Other adverse effects**
no data available

**SECTION 13: Disposal considerations**

13.1 **Waste treatment methods**

**Product**
Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**
Dispose of as unused product.
SECTION 14: Transport information

14.1 UN number
ADR/RID: -  IMGD: -  IATA: -

14.2 UN proper shipping name
ADR/RID: Not dangerous goods
IMGD: Not dangerous goods
IATA: Not dangerous goods

14.3 Transport hazard class(es)
ADR/RID: -  IMGD: -  IATA: -

14.4 Packaging group
ADR/RID: -  IMGD: -  IATA: -

14.5 Environmental hazards
ADR/RID: no  IMGD Marine pollutant: no  IATA: no

14.6 Special precautions for user
no data available

SECTION 15: Regulatory information
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information
Full text of H-statements referred to under sections 2 and 3.
- Acute Tox. Acute toxicity
- Carc. Carcinogenicity
- Eye Irrit. Eye irritation
- H302 Harmful if swallowed.
- H319 Causes serious eye irritation.
- H351 Suspected of causing cancer.

Full text of R-phrases referred to under sections 2 and 3
- Xn Harmful
- R22 Harmful if swallowed.
- R36 Irritating to eyes.
- R40 Limited evidence of a carcinogenic effect.

Further information
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