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

1.1 Product identifier
 Chemical name: Sodium p-toluenesulfonchloramide, trihydrate
 Synonyms: Tosylchloramide sodium, Chloramine-T.
 Formula: C<sub>7</sub>H<sub>7</sub>ClNNaO<sub>2</sub>S.3H<sub>2</sub>O
 Molecular mass: 281.7
 CAS-No.: 7080-50-4
 EC-No.: 204-854-7
 Annex VI-No.: 616-010-00-9
 Registration number: REACH exemption. Registered by the Biocidal Products Act
 Approval number: 8241 N

1.2 Relevant identified uses and uses advised against
 Relevant identified uses: Disinfectant and sterilant.
 Uses advised against: Simultaneous use with alkaline cleaning agents (ineffective in an alkaline medium).

1.3 Details of the manufacturer or supplier
 Supplier: VEIP bv
 Address: Molenvliet 1
 3960 BB Wijk bij Duurstede
 The Netherlands
 Telephone number: +31 343 57 22 44
 Fax: +31 343 57 71 04
 E-mail address: info@veip.nl

1.4 Emergency telephone number
 Emergency: +31 343 57 22 44
 Medical information:
 The Netherlands: +31 (0)30-274 88 88
 United Kingdom: 844 892 0111

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
 According to Regulation (EC) No. 1272/2008
 Hazard classes
 Acute toxicity: Acute Tox. 4, H302
 Skin corrosion/irritation: Skin Corr. 1B, H314
 Respiratory sensitization: Resp. Sens. 1, H334

For full text of Hazard statements: see subsection 2.2.

2.2 Label elements
 2.2.1 Hazard pictograms

2.2.2 Signal word: DANGER

2.2.3 Hazard statements
 H302: Harmful if swallowed.
 H314: Causes severe skin burns and eye damage.
 H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 EUH031: Contact with acids liberates toxic gas.
2.2.4 Precautionary statements

P260 Do not breathe dust/spray.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P301 + P330 + IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P331
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P338
P312 Call a POISON CENTER / doctor / physician if you feel unwell.

2.3 Other hazards

The product does not meet the criteria for PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Main constituent
Sodium p-toluenesulfonchloramide, trihydrate

Identity
CAS-No. 70-80-5
EC-No. 204-854-7

Classified impurities or stabilizers
None.

3.2 Mixtures
Not applicable.

None.

SECTION 4: First aid measures

4.1 Description of first aid measures

4.1.1 Inhalation
Fresh air, rest. Get medical advice / attention if you feel unwell.

4.1.2 Skin contact
Remove contaminated clothes, rinse skin with water or shower.

4.1.3 Eye contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do; continue rinsing. If eye irritation persists: call a doctor / physician.

4.1.4 Ingestion
Rinse mouth, drink plenty of water and call a doctor / physician. Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

4.2.1 Acute symptoms and effects from exposure
Inhalation of high concentrations of dust may cause pneumonia. It is possible that the symptoms of pneumonia occur after several hours or days. Therefore, medical observation is required.

4.2.2 Delayed symptoms and effects from exposure
May cause a disease of the mucous membranes of the upper respiratory tract to people who are sensitive to chlorine. Intensive contact with the skin may cause skin disease (eczema).

SECTION 5: Firefighting measures

5.1 Extinguishing media

5.1.1 Suitable extinguishing media
Powder, water spray.
5.1.2 Unsuitable extinguishing media
Carbon dioxide.

5.2 Special hazards arising from the substance or mixture
In case of fire the product emits toxic fumes including hydrogen chloride, nitrogen-, sulfur- and carbonoxides.

5.3 Advice for fire-fighters
5.3.1 Protective actions
In case of fire: keep containers cool by spraying with water.

5.3.2 Special protective equipment
Full protective suit, self-contained respiratory protective.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Protective clothing, gloves, boots. Respiratory protection.

6.2 Environmental precautions
Keep away from drains, surface water or soil.

6.3 Methods and material for containment and cleaning up
Scoop up spilled product and store in a drum. Wash away any residue with water.

6.4 Reference to other sections
See also sections 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Use only in well-ventilated areas.
Wear the prescribed personal protective equipment.

7.2 Conditions for safe storage, including any incompatibilities
7.2.1 Fire and explosion prevention
Keep container in a cool, dry place.
Store in a closed container.
Keep in a fire-resistant place separate from oxidising agents and acids.

7.2.2 Protection against ambient influences
Protect against contact with hot surfaces (steam pipelines) and direct sunlight.
Suitable materials for packaging: approved plastic.

7.3 Specific end use(s)
Please contact the supplier.

SECTION 8: Exposure controls / personal protection

8.1 Control parameters
8.1.1 Exposure limit values

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Value</th>
<th>Indicative</th>
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</thead>
<tbody>
<tr>
<td>TWA limit value 8 hours</td>
<td>mg/m^3</td>
<td>not determined</td>
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<tr>
<td>TWA limit value 15 min.</td>
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</tr>
<tr>
<td>DNEL / DMEL-values</td>
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<td></td>
</tr>
</tbody>
</table>
PNEC-values
No data available.

8.2 Exposure controls
8.2.1 Technical measures
Ventilation and local extraction.

8.2.2 Individual protective measures
Eye protection
In case of release of dust: safety goggles.
Skin protection
- Hands
  Gloves nitril rubber 0.7 mm gloves Breakthrough time > 8 hours
  Gloves linear low-density polyethylene (LLDPE) 0.75 mm gloves Breakthrough time > 8 hours
- Other measures
  Protective clothing.
Respiratory protection
Upon release of dust: filter respirator.
Thermal hazards
Not applicable.

8.2.3 Environmental exposure controls
Remove contaminated air from the local extractor and drain waste water in accordance with local environmental regulations.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
Appearance
  - form Powder
  - colour White
  Odour Chlorine-like
  Odour threshold (mg/ m^3) No data available.
  pH (5% solution) 8 - 10
  Melting point / freezing point (°C) 167 (decomposition)
  Boiling point (°C) at 1013 hPa Not applicable.
  Flash point (°C) 192
  Explosive limits, g/m^3 in lucht No data available.
  Vapour pressure at 25 °C (hPa) 1.06 x 10^{-7}
  Relative density (water=1) 1.4
  Solubility in water at 20 °C (g/l) 150
  Partition coefficient (log K octanol/water) - 1.3
  Auto-ignition temperature (°C) No data available.
  Decomposition temperature (°C) 120 - 165; the substance changes at 60 °C in the anhydrous form.
  Explosive properties No data available.
  Oxidising properties A solution in water has oxidising properties.

9.2 Other safety information
Bulk density (kg/m^3) 1430
Apparent density (kg/l) 0.54 - 0.68

SECTION 10: Stability and reactivity

10.1 Reactivity
A solution in water has oxidising properties.
No hazardous reaction if instructions for handling and storage are observed.

10.2 Chemical stability
The product is stable when stored at normal ambient temperature. Decomposes slowly on exposure to water (moisture). May violently decompose when heated and at temperatures above 130 °C.

10.3 Possibility of hazardous reactions
Reacts violently with strong oxidants and acids with the formation of toxic chlorine gas.

10.4 Conditions to avoid
Storage temperatures >40 °C and moisture. Ignition sources (open flames, hot surfaces and sparks). Contact with strong oxidizers may cause fire and explosions.

10.5 Incompatible materials
Strong oxidising and acids.

10.6 Hazardous decomposition products
Does not decompose if used and stored as directed. Chlorine-containing gases can be released upon decomposition through contact with water vapour.

SECTION 11 Toxicological information

11.1 Information on toxicological effects
a) Acute toxicity
   – Oral LD50 (rat) 935 mg/kg
   – Dermal LD50 (rabbit) no data available.
   – Inhalation LC50 (rat, 4 hours) > 0.275 mg/L (dust)

b) Skin corrosion/irritation
   The substance is irritating to the skin.

c) Serious eye damage/irritation
   The substance is corrosive to eyes.

d) Respiratory or skin sensitisation
   Inhalation of liberated dust can cause allergy or asthma symptoms or breathing difficulties.

e) Germ cell mutagenicity
   Genotoxicity in vivo: Micronucleus test: negative.
   Genotoxicity in vitro: Ames-test negative

f) Carcinogenicity
   No data available.

g) Reproductive toxicity
   No data available.

h) Specific target organ toxicity – single exposure
   Liberated dust may irritate the respiratory tract.

i) Specific target organ toxicity – repeated exposure
   No data available.

j) Aspiration hazard
   No data available.

11.2 Likely routes of exposure
The substance can be absorbed into the body after ingestion.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure
Absorption in the body may cause formation of methemoglobin. In certain concentration it causes cyanosis.
SECTION 12: Ecological information

12.1 Toxicity
- Fish LC50, 96 hours 31 mg/L
- Crustaceans LC50 Daphnia, 48 hours 4.5 mg/L
- Algae IC50, 72 hours 5 mg/L

12.2 Persistence and degradability
Biodegradation 28 days: 90%
The product is readily biodegradable.

12.3 Bioaccumulation potential
Bioconcentration factor (BCF): 1,125
Log K octanol / water: -1.3
No significant potential for bioaccumulation (BCF < 500 and log K octanol/water < 4).

12.4 Mobility in soil
Koc-waarde: 2244
The product is little mobile in the soil.

12.5 Results of PBT and vPvB assessment
The product contains no substances to be considered as PBT or vPvB.

12.6 Other adverse effects
Hazardous to water.
German hazard codes for water (WGK): 2

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product disposal
Dispose of to a registered incineration plant for solids, or as hazardous waste in accordance with local regulations.
Do not dispose of the product in residual household waste.
Prevent the waste product reaching sewers.

Packaging disposal
Dispose of packagings with remainders as hazardous waste.
Cleaned packagings may be reused.

Waste treatment-relevant information
European list of waste (EURAL): 07 04 13.

SECTION 14: TRANSPORT INFORMATION

14.1 UN-number 3263
14.2 Proper shipping name CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (sodium p-toluenesulfonchloramide)
14.3 Transport hazard class 8
14.4 Packinggroup III
14.5 Environmental hazards Marine pollutant No
14.6 Specials precautions for user

Risk label: 8
Tunnel category: (E)
Hazard Identification Number: 80
Transport category: 3
Limited quantity (LQ): 5 kg (inner package) / 30 kg (package)

By IATA is only a ceiling for the outer package viz a maximum of 25 kg for a package when transported by passenger / cargo aircraft and 100 kg when transported by cargo aircraft.

Excepted quantity: E1

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

SECTION 15: Regulatory information

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

The applicable EU-/national regulations have to be observed.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out for sodium p-toluenesulfonchloramide, trihydrate.

SECTION 16: Other information

16.1 Information on revision

Previous version: 4.8
Reason for changes: Adaptation of the telephone number Medical information in the United Kingdom

16.2 Abbreviations and acronyms

CAS: Chemical Abstracts Service (Division of the American Chemical Society)
CLP: Classification, Labelling and Packaging
EC50: Effect Concentration, 50 percent (concentration at which 50 per cent of animals show a particular effect)
EC: European Community
IC50: Inhibitory Concentration, 50 percent (concentration at which 50 per cent of algae show growth inhibition)
LC50: Lethal Concentration, 50 percent (concentration at which 50 per cent of animals die)
LD50: Lethal Dose, 50 percent (dose at which 50 per cent of animals die)
PBT: Persistent, Bioaccumulative and Toxic
ppm: Parts per million
TWA: Time Weighted Average
vPvB: very Persistent and very Bioaccumulative

16.3 Literature references and sources for data

CGTB-data base and external Safety Data Sheets.

16.4 Full text of Hazard statements which are not written out in full under Sections 2 to 15

None.

16.5 Training recommendations

Ensure that there is proper information, instruction and training available for users.

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