1 - IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY

Substance
Chemical Name 3-[(4-Amino-2-methyl-5-pyrimidinyl) methyl]-5-(2-hydroxyethil)-4-methylthiazolium chloride monohydrochloride
Commercial Names and Synonyms Thiamine hydrochloride, Vitamin B1 hydrochloride, Aneuryne hydrochloride
Chemical Abstract Nomenclature

# Uses Yeast nutrient
Company Tel. +39-0321-790-300 (please see bottom of the page)
# Emergency service Niguarda Hospital tel. +39-02-6610-1029

2 - COMPOSITION / INFORMATION ON INGREDIENTS

- General description of the components, relative concentrations and risks

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>N° CAS</th>
<th>N°EINECS</th>
<th>Conc/Range %</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiamine hydrochloride</td>
<td>67-03-8</td>
<td>200-641-8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Formula C12H17ClN4OS.HCl

The product does not contain any other products and/or impurities that influence the product classification.

3 – HAZARDS IDENTIFICATION

Not dangerous classified substance according to official current regulations.

Health risks Prevent contact with the skin
Environmental risks None
Physical and chemical hazards None
Fire and explosion

4 – FIRST AID MEASURES

Inhalation Rest, fresh air
Skin contact Wash thoroughly with water and soap
Eyes contact Rinse thoroughly for at least 15 minutes under running water and keep eyes open
Ingestion Rinse the mouth and drink plenty of water

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5 – FIRE-FIGHTING MEASURES
Advised extinguishing agents: Nebulized water, carbon dioxide, dry extinguisher, foam
Extinguishing agents to be avoided: Unknown
Dangers caused by combustion matters: HCN, NOx, COx, HCl, SOx
Protection measures in case of intervention: Breathing apparatus
Additional information: Fire residual matters and contaminated extinguishing water shall be disposed of in accordance with local applicable law and regulations

6 – ACCIDENTAL RELEASES MEASURES
Collection and disposal methods: Use mechanical handling equipment
Personal-related safety precautions: Prevent dust formation
Environmental protection: Prevent the introduction of the product within the sewage system or canals

7 – HANDLING AND STORAGE
Handling: Precautions against fire and explosions, prevent dust formation. Prevent the accumulation of electrostatic charges. Cool with water the containers in danger of heat. When transferring big quantities of the products without using an aspirator, protect the respiratory system
Storage: Store in sealed containers in a dry and cool place. Keep away from light

8 – PERSONAL PROTECTION / EXPOSURE CONTROL
Respiratory protection: In case of release of breathable dusts
Skin protection
Hand protection: Rubber gloves
Eyes protection: Safety goggles with side screen
Exposure limits: TLV-TWA: unknown, 10 mg/m³ (irritant dusts)
9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance  physical state  Crystal powder
   colour         White
   smell          Distinctive
Melting point  248 °C (decomposition)
Boiling point
Density       0.4 g/cm³
Solubility in water  > 500 g/L
Flash point
Inflammability limits (vol % in air)
Autoignition temperature  >365 °C
pH           2.7-3.4 (10 g/L)
Coefficient of division n-octanol/water

10 – STABILITY AND REACTIVITY

Conditions to be avoided  Danger of dust explosions
Products to be avoided  Oxidants, reducers, metals
Hazardous decomposition products  Toxic gases/vapours (containing chloride)

11 – TOXICOLOGICAL INFORMATION

Penetration ways  Inhalation yes
   Ingestion unlikely event
   Contact yes
Acute toxicity  LD50 (oral, rat): 5000 mg/kg
Inhalation consequences
Ingestion consequences
Skin local effects  Possible sensitising effect on skin on hypersensitive people and in case of prolonged contact
Eyes local effects
Additional information  Unknown

12 – ECOLOGICAL INFORMATION

The product must not come to watercourses without a preventive treatment (biological purification plant).

COD: 1213 mg/g
DOC-value: 392 mg/g
BOD₅ : < 2 mg/g

13 – DISPOSAL CONSIDERATIONS

Product  Product residuals to be disposed of according to official current regulations and by an authorized contracting firm (appropriate thermo-destruction plant)
Contaminated packages  Empty the package, unfold it completely - Dispose of depending on the material

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14 – TRANSPORT INFORMATION

Product non subject to ADR/RID, IMO and IATA regulations, related to road, sea and airway transport of dangerous goods.

15 – REGULATORY INFORMATION

EC labelling
[ ] Required by the law
[ ] Temporary
[ X ] Not required

# Classification

16 – OTHER INFORMATION

Hazard symbol
# Risk phrases
Safety phrases

This material safety data sheet has been issued in accordance with 2001/58/CE.

Before starting the use of this product for any new process or experiment, it must be carried out a deep study on the safety and the compatibility of the product itself with materials it could come in contact with.

The information contained in this safety data sheet is given to protect health and safety at work. No responsibility is taken for possible damages arising from uses of this information for different purposes from the ones here indicated.

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