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

1.1. Product identifier

685 System Protection N468500K5AB
CAS No: 66215-27-8
EC No: 266-257-8

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

Use of the substance/mixture
Additive

1.3. Details of the supplier of the safety data sheet

Company name: TUNAP GmbH & Co. KG
Street: Bürgermeister-Seidl-Str. 2
Place: D-82515 Wolfratshausen
Telephone: +49 (0) 8171/1600 - 0
Telefax: +49 (0) 8171/1600 - 40
e-mail: sdb@tunap.com
Internet: www.tunap.com

1.4. Emergency telephone number:
+49 (0) 30 30 686 790 (Giftnotruf Berlin)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
- Carcinogenicity: Carc. 1B
- Germ cell mutagenicity: Muta. 2
- Acute toxicity: Acute Tox. 3
- Acute toxicity: Acute Tox. 4
- Acute toxicity: Acute Tox. 4
- Skin corrosion/irritation: Skin Corr. 1B
- Serious eye damage/eye irritation: Eye Dam. 1
- Respiratory or skin sensitisation: Skin Sens. 1A
- Specific target organ toxicity - repeated exposure: STOT RE 2
- Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:
- Toxic in contact with skin.
- Harmful if inhaled.
- Harmful if swallowed.
- Causes severe skin burns and eye damage.
- Causes serious eye damage.
- May cause an allergic skin reaction.
- Suspected of causing genetic defects.
- May cause cancer.
- May cause damage to organs through prolonged or repeated exposure.
- Toxic to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling
- 3,3’-Methylenbis[5-methyloxazolidine]

Signal word: Danger
Safety Data Sheet

according to Regulation (EC) No 1907/2006

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Pictograms:

Hazard statements

H302+H332 Harmful if swallowed or if inhaled.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe vapours.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P310 Immediately call a POISON CENTER/doctor.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314 Get medical advice/attention if you feel unwell.
P501 Dispose of contents/container according to the official regulations.

2.3. Other hazards

Use biocides safely. Always read the label and product information before use.

SECTION 3: Composition/information on ingredients

3.1. Substances

Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC No</td>
<td>Index No</td>
<td>REACH No</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Carc. 1B, Muta. 2, Acute Tox. 3, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1A, STOT RE 2, Aquatic Chronic 2; H350 H341 H311 H332 H302 H314 H318 H317 H373 H411</td>
<td></td>
</tr>
</tbody>
</table>

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove persons to safety. Never give anything by mouth to an unconscious person or a person with cramps.
**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

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**After inhalation**
- Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice.

**After contact with skin**
- Wash with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In all cases of doubt, or when symptoms persist, seek medical advice.

**After contact with eyes**
- Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.

**After ingestion**
- Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Call a physician in any case!

4.2. **Most important symptoms and effects, both acute and delayed**
- Headache, nausea, dizziness, fatigue, skin irritation

4.3. **Indication of any immediate medical attention and special treatment needed**
- Treat symptomatically. Call a POISON CENTER. Symptoms can occur only after several hours.

---

### SECTION 5: Firefighting measures

5.1. **Extinguishing media**
- Suitable extinguishing media
- Unsuitable extinguishing media
  - High power water jet.

5.2. **Special hazards arising from the substance or mixture**
- Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO2, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

5.3. **Advice for firefighters**
- In case of fire and/or explosion do not breathe fumes. Move undamaged containers from immediate hazard area if it can be done safely. In case of fire: Wear self-contained breathing apparatus.

Additional information
- Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

---

### SECTION 6: Accidental release measures

6.1. **Personal precautions, protective equipment and emergency procedures**
- Wear breathing apparatus if exposed to vapours/dusts/aerosols. Remove all sources of ignition. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Wear personal protection equipment.

6.2. **Environmental precautions**
- Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Ensure all waste water is collected and treated via a waste water treatment plant.

6.3. **Methods and material for containment and cleaning up**
- Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Clean contaminated articles and floor according to the environmental legislation.

6.4. **Reference to other sections**
- Safe handling: see section 7
- Personal protection equipment: see section 8
- Disposal: see section 13

---

### SECTION 7: Handling and storage
7.1. Precautions for safe handling

Advice on safe handling
Observe instructions for use.
Dust must be exhausted directly at the point of origin. Vapours/aerosols must be exhausted directly at the point of origin. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.
When using do not eat, drink, smoke, sniff.
Wear personal protection equipment (refer to section 8).

Advice on protection against fire and explosion
Keep away from sources of ignition - No smoking.

Further information on handling
Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Keep container tightly closed. Observe legal regulations and provisions.

Hints on joint storage
Do not store together with: Oxidizing agents. Pyrophoric or self-heating substances. Food and feedingstuffs.

Further information on storage conditions
Store in a cool dry place. Observe legal regulations and provisions.

7.3. Specific end use(s)

Diesel fuel additive

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional advice on limit values
a no restriction
b End of exposure or end of shift
c at long term exposure: after several previous shifts
d before next shift

blood (B)
Urine (U)

8.2. Exposure controls

Appropriate engineering controls
If handled uncovered, arrangements with local exhaust ventilation have to be used.

Protective and hygiene measures
Avoid exposure. Wear suitable protective clothing. Draw up and observe skin protection programme.

Eye/face protection
Suitable eye protection: Tightly sealed safety glasses.
DIN EN 166

Hand protection
Protect skin by using skin protective cream. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
Suitable material: NBR (Nitrile rubber) Breakthrough time (maximum wearing time) 480min
Thickness of the glove material 0,45 mm
DIN EN 374
Skin protection
Wear suitable protective clothing. Take off immediately all contaminated clothing and wash it before reuse.

Respiratory protection
Wear breathing apparatus if exposed to vapours/dusts/aerosols.
When exceeding the relevant workplace exposure limits, note the following:
Suitable respiratory protective equipment: Combination filter device (DIN EN 141).
Filtering device with filter or ventilator filtering device of type: A
Observe the wear time limits as specified by the manufacturer.
Observe legal regulations and provisions.

Environmental exposure controls
Observe legal regulations and provisions.

**SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour:</td>
<td>amine-like</td>
</tr>
</tbody>
</table>

**Test method**

pH-Value (at 20 °C): 9,5

Changes in the physical state

<table>
<thead>
<tr>
<th>Melting point:</th>
<th>not determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial boiling point and boiling range:</td>
<td>204 °C</td>
</tr>
<tr>
<td>Flash point:</td>
<td>&gt; 100 °C</td>
</tr>
</tbody>
</table>

**Flammability**

<table>
<thead>
<tr>
<th>Solid:</th>
<th>not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas:</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

**Auto-ignition temperature**

<table>
<thead>
<tr>
<th>Solid:</th>
<th>not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas:</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

Decomposition temperature: not determined

**Oxidizing properties**

Not oxidising.

Vapour pressure: not determined
Vapour pressure: 2 hPa (at 20 °C)
Density (at 20 °C): 1,049 g/cm³ DIN 51757
Water solubility: easily soluble.

**Solubility in other solvents**

not determined

Partition coefficient: not determined
Viscosity / dynamic: DIN 53019-1
Vapour density: not determined
Evaporation rate: not determined

9.2. Other information

Solid content: not determined
SECTION 10: Stability and reactivity

10.1. Reactivity
No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability
The product is stable under normal conditions.

10.3. Possibility of hazardous reactions
Do not mix with acids.

10.4. Conditions to avoid
The product is chemically stable under recommended conditions of storage, use and temperature.

10.5. Incompatible materials
Oxidizing agents. Pyrophoric or self-heating substances.

10.6. Hazardous decomposition products
Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO2, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

Further information
Do not mix with other chemicals.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Toxicokinetics, metabolism and distribution
There are no data available on the mixture itself.

Acute toxicity
Harmful if swallowed or if inhaled.
Toxic in contact with skin.

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Exposure route</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>66204-44-2</td>
<td>3,3’-Methylenbis[5-methyloxazolidine]</td>
<td>oral</td>
<td>LD50</td>
<td>Rat</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;500-2000 mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>ATE</td>
<td>300 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalation vapour</td>
<td>ATE</td>
<td>11 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalation (4 h) aerosol</td>
<td>LC50</td>
<td>&gt;1,01 mg/l</td>
<td>Rat</td>
<td></td>
</tr>
</tbody>
</table>

Irritation and corrosivity
Causes severe skin burns and eye damage.

Sensitising effects
May cause an allergic skin reaction. (3,3’-Methylenbis[5-methyloxazolidine])

Carcinogenic/mutagenic-toxic effects for reproduction
Suspected of causing genetic defects. (3,3’-Methylenbis[5-methyloxazolidine])
May cause cancer. (3,3’-Methylenbis[5-methyloxazolidine])
Reproductive toxicity: Based on available data, the classification criteria are not met.
No indications of human carcinogenicity exist.
No indications of human germ cell mutagenicity exist.
No indications of human reproductive toxicity exist.
STOT-single exposure
   Based on available data, the classification criteria are not met.

STOT-repeated exposure
   May cause damage to organs through prolonged or repeated exposure. (3,3'-Methylenbis[5-methyloxazolidine])

Aspiration hazard
   Based on available data, the classification criteria are not met.

Specific effects in experiment on an animal
   No information available.

Additional information on tests
   The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information

12.1. Toxicity
   Aquatic toxicity: The classification criteria for this hazard class are not met by definition.

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Aquatic toxicity</th>
<th>Dose</th>
<th>[h]</th>
<th>[d]</th>
<th>Species</th>
<th>Source</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>66204-44-2</td>
<td>3,3'-Methylenbis[5-methyloxazolidine]</td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>10-100</td>
<td>96 h</td>
<td>Brachydanio rerio (zebra-fish)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute algae toxicity</td>
<td>ErC50</td>
<td>2-10</td>
<td>96 h</td>
<td>Desmodesmus subspicatus</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute crustacea toxicity</td>
<td>EC50</td>
<td>10-100</td>
<td>48 h</td>
<td>Daphnia magna</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
   The product has not been tested.

12.3. Bioaccumulative potential
   The product has not been tested.

Partition coefficient n-octanol/water

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>66204-44-2</td>
<td>3,3'-Methylenbis[5-methyloxazolidine]</td>
<td>-0,3</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil
   The product has not been tested.

12.5. Results of PBT and vPvB assessment
   The product has not been tested.

12.6. Other adverse effects
   No information available.

Further information
   No special environmental measures are necessary.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
   Advice on disposal
      Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

   Waste disposal number of waste from residues/unused products
      070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste
Safety Data Sheet

according to Regulation (EC) No 1907/2006

Waste disposal number of used product
070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste

Waste disposal number of contaminated packaging
150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging
Wash with plenty of water. Completely emptied packages can be recycled.

SECTION 14: Transport information

Land transport (ADR/RID)
14.1. UN number: UN 3267
14.2. UN proper shipping name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (3,3’-Methylenbis[5-methyloxazolidine])
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8
Classification code: C7
Special Provisions: 274
Limited quantity: 5 L
Excepted quantity: E1
Transport category: 3
Hazard No: 80
Tunnel restriction code: E

Inland waterways transport (ADN)
14.1. UN number: UN 3267
14.2. UN proper shipping name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (3,3’-Methylenbis[5-methyloxazolidine])
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8
Classification code: C7
Special Provisions: 274
Limited quantity: 5 L
Excepted quantity: E1

Marine transport (IMDG)
14.1. UN number: UN 3267
14.2. UN proper shipping name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (3,3’-Methylenbis[5-methyloxazolidine])
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8
Marine pollutant: yes
Special Provisions: 223, 274
Limited quantity: 5 L
Excepted quantity: E1
EmS: F-A, S-B
Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 3267
14.2. UN proper shipping name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (3,3'-Methylenbis[5-methylazoxolidine])
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8
Special Provisions: A3 A803
Limited quantity Passenger: 1 L
Passenger LQ: Y841
Excepted quantity: E1
IATA-packing instructions - Passenger: 852
IATA-max. quantity - Passenger: 5 L
IATA-packing instructions - Cargo: 856
IATA-max. quantity - Cargo: 60 L

14.5. Environmental hazards
ENVIRONMENTALLY HAZARDOUS: yes
Danger releasing substance: 3,3’-Methylenbis[5-methylazoxolidine]

14.6. Special precautions for user
Warning: strongly corrosive.

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

EU regulatory information
2010/75/EU (VOC): No information available.
2004/42/EC (VOC): No information available.

Additional information
Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

National regulatory information
Employment restrictions: Observe restrictions to employment for juvenils according to the ‘juvenile work protection guideline’ (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 3 - highly water contaminating

Additional information
Information in accordance with Regulation (EU) Nr. 528/2012

3,3’-Methylenbis[5-methylazoxolidine] 100g
N-58106

15.2. Chemical safety assessment
For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Abbreviations and acronyms
ADR: Accord européen sur le transport des marchandises dangereuses par Route
Safety Data Sheet

according to Regulation (EC) No 1907/2006

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(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
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

 Relevant H and EUH statements (number and full text)

- H302 Harmful if swallowed.
- H302+H332 Harmful if swallowed or if inhaled.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H332 Harmful if inhaled.
- H341 Suspected of causing genetic defects.
- H350 May cause cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H411 Toxic to aquatic life with long lasting effects.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.