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

### 1.1. Product identifier

936 Neutralization solution 200 ml AB

UFI: R628-202U-Q00H-EVXT

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

**Use of the substance/mixture**

neutralisation

### 1.3. Details of the supplier of the safety data sheet

Company name: TUNAP GmbH & Co. KG
Street: Buergermeister-Seidl-Strasse 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:

111 NHS (National Health Service)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**GB CLP Regulation**

Aerosol 3; H229

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

**GB CLP Regulation**

**Signal word:** Warning

**Hazard statements**

H229 Pressurised container: May burst if heated.

**Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P251 Do not pierce or burn, even after use.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

### 2.3. Other hazards

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

**Relevant ingredients**

| CAS No | Chemical name | | | Quantity |
|---|---|---|---|---|
| | EC No | Index No | REACH No | |
| | Classification (GB CLP Regulation) | | | |
| 7664-38-2 | phosphoric acid; orthophosphoric acid 85 % | | | 0.1 - < 1 % |
| | 231-633-2 | 015-011-00-6 | | |
| | Met. Corr. 1, Acute Tox. 4, Skin Corr. 1B; H290 H302 H314 | | | |

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

**Specific Conc. Limits, M-factors and ATE**

| CAS No | EC No | Chemical name | Quantity |
|---|---|---|---|
| | Specific Conc. Limits, M-factors and ATE | | |
| 7664-38-2 | 231-633-2 | phosphoric acid; orthophosphoric acid 85 % | 0.1 - < 1 % |
| | inhalation: LC50 = >5 mg/l (dusts or mists); dermal: LD50 = 2740 mg/kg; oral: LD50 = 4200 mg/kg Skin Corr. 1B; H314: >= 25 - 100 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 25 | | |

## 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.

**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**

Co-ordinate fire-fighting measures to the fire surroundings.

**Unsuitable extinguishing media**

High power water jet.

### 5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

### 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**

Danger of bursting container.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**General advice**

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.

**For non-emergency personnel**

First aider: Pay attention to self-protection!

**For emergency responders**

Fight fire with normal precautions from a reasonable distance.

### 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

**For containment**

Prevent spread over a wide area (e.g. by containment or oil barriers).

**For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

**Other information**

Absorb with liquid-binding material (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).
In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

**Advice on protection against fire and explosion**

Heating causes rise in pressure with risk of bursting.

**Advice on general occupational hygiene**

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

### 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**

Protect from frost. Protect from direct sunlight. Store in a cool dry place. Observe legal regulations and provisions.

### 7.3. Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

**Exposure limits (EH40)**

| CAS No | Substance | ppm | mg/m³ | fibres/ml | Category | Origin |
|---|---|---|---|---|---|---|
| 7664-38-2 | Orthophosphoric acid | - | 1 | | TWA (8 h) | WEL |
| | | - | 2 | | STEL (15 min) | WEL |

**DNEL/DMEL values**

| CAS No | Substance | | |
|---|---|---|---|
| DNEL type | Exposure route | Effect | Value |
| 7664-38-2 | phosphoric acid; orthophosphoric acid 85 % | | |
| Worker DNEL, long-term | inhalation | systemic | 10,7 mg/m³ |
| Worker DNEL, long-term | inhalation | local | 1 mg/m³ |
| Worker DNEL, acute | inhalation | local | 2 mg/m³ |
| Consumer DNEL, long-term | inhalation | systemic | 4,57 mg/m³ |
| Consumer DNEL, long-term | inhalation | local | 0,36 mg/m³ |
| Consumer DNEL, long-term | oral | systemic | 0,1 mg/kg bw/day |

**Additional advice on limit values**

a no restriction
b End of exposure or end of shift
c at long-term exposure:
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.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Suitable eye protection: Tightly sealed safety glasses.
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: 480min
Thickness of the glove material 0,45 mm
EN ISO 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

| | |
|---|---|
| Physical state: | liquid |
| Colour: | colourless |
| Odour: | characteristic |

| | | Test method |
|---|---|---|
| Boiling point or initial boiling point and boiling range: | 100 °C | |
| Auto-ignition temperature: | not applicable | |
| pH-Value (at 20 °C): | 2,2 | DIN 19268 |
| Density: | 1 g/cm³ | DIN 51757 |

### 9.2. Other information

**Information with regard to physical hazard classes**

| | |
|---|---|
| Sustaining combustion: | No data available |

**Other safety characteristics**

| | |
|---|---|
| Sublimation point: | not applicable |
| Softening point: | not applicable |
| Pour point: | not applicable |

**Further Information**

Data apply to technical substance: Relative density, Colour, Odour, Viscosity, pH.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No information available.

### 10.2. Chemical stability

The product is stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Do not expose to temperatures above 50 °C. Heating causes rise in pressure with risk of bursting.

### 10.4. Conditions to avoid

Protect from frost.

### 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 hazard classes as defined in GB CLP Regulation

**Toxicocinetics, metabolism and distribution**

There are no data available on the mixture itself.

**Acute toxicity**

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

**ATEmix calculated**

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

| CAS No | Chemical name | | | | |
|---|---|---|---|---|---|
| | Exposure route | Dose | Species | Source | Method |
| 7664-38-2 | phosphoric acid; orthophosphoric acid 85 % | | | | |
| | oral | LD50 4200 mg/kg | Rat | | |
| | dermal | LD50 2740 mg/kg | Rabbit | | |
| | inhalation (4 h) dust/mist | LC50 >5 mg/l | Rat | | |

**Irritation and corrosivity**

Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

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

**Carcinogenic/mutagenic/toxic effects for reproduction**

Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
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**

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

**Aspiration hazard**

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

**Information on likely routes of exposure**

Ingestion, Inhalation, Skin contact, Eye contact.
Reference to other sections: 2.1, 4.2.

**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].

### 11.2. Information on other hazards

**Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

**Other information**

No information available.

## SECTION 12: Ecological information

### 12.1. Toxicity

There are no data available on the mixture itself.

| CAS No | Chemical name | | | | | | |
|---|---|---|---|---|---|---|---|
| | Aquatic toxicity | Dose | | [h] \| [d] | Species | Source | Method |
| 7664-38-2 | phosphoric acid; orthophosphoric acid 85 % | | | | | | |
| | Acute fish toxicity | LC50 | 138 mg/l | 96 h | Gambusia affinis | | |
| | Acute algae toxicity | ErC50 mg/l | > 100 | 72 h | Desmodesmus subspicatus | Study report (2010) | EU Method C.3 |
| | Acute crustacea toxicity | EC50 mg/l | > 100 | 48 h | Daphnia magna | Study report (2010) | OECD Guideline 202 |
| | Acute bacteria toxicity | EC50 mg/l ( ) | > 1000 | 3 h | activated sludge of a predominantly domestic sewag | Study report (2010) | OECD Guideline 209 |

**12.2. Persistence and degradability**

There are no data available on the mixture itself. AOX (mg/l): 0

**12.3. Bioaccumulative potential**

There are no data available on the mixture itself.

**12.4. Mobility in soil**

No information available.

**12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.
This substance does not meet the criteria for classification as PBT or vPvB.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**12.7. Other adverse effects**

No information available.

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

**Disposal recommendations**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

**List of Wastes Code - residues/unused products**

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

**List of Wastes Code - used product**

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

**List of Wastes Code - contaminated packaging**

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

**Contaminated packaging**

Water (with cleaning agent). Completely emptied packages can be recycled.

## SECTION 14: Transport information

**Land transport (ADR/RID)**

**14.1. UN number or ID number:** UN 1950

| | |
|---|---|
| **14.2. UN proper shipping name:** | AEROSOLS |
| **14.3. Transport hazard class(es):** | 2 |
| **14.4. Packing group:** | - |
| Hazard label: | 2.2 |
| Classification code: | 5A |
| Special Provisions: | 190 327 344 625 |
| Limited quantity: | 1 L |
| Excepted quantity: | E0 |
| Transport category: | 3 |
| Tunnel restriction code: | E |

**Inland waterways transport (ADN)**

| | |
|---|---|
| **14.1. UN number or ID number:** | UN 1950 |
| **14.2. UN proper shipping name:** | AEROSOLS |
| **14.3. Transport hazard class(es):** | 2 |
| **14.4. Packing group:** | - |
| Hazard label: | 2.2 |
| Classification code: | 5A |
| Special Provisions: | 190 327 344 625 |
| Limited quantity: | 1 L |
| Excepted quantity: | E0 |

**Marine transport (IMDG)**

| | |
|---|---|
| **14.1. UN number or ID number:** | UN 1950 |
| **14.2. UN proper shipping name:** | AEROSOLS |
| **14.3. Transport hazard class(es):** | 2.2 |
| **14.4. Packing group:** | - |
| Hazard label: | 2.2 |
| Marine pollutant: | no |
| Special Provisions: | 63, 190, 277, 327, 344, 959 |
| Limited quantity: | 1000 mL |
| Excepted quantity: | E0 |
| EmS: | F-D, S-U |

**Air transport (ICAO-TI/IATA-DGR)**

| | |
|---|---|
| **14.1. UN number or ID number:** | UN 1950 |
| **14.2. UN proper shipping name:** | AEROSOLS, non-flammable |
| **14.3. Transport hazard class(es):** | 2.2 |
| **14.4. Packing group:** | - |
| Hazard label: | 2.2 |
| Special Provisions: | A98 A145 A167 A802 |
| Limited quantity Passenger: | 30 kg G |
| Passenger LQ: | Y203 |
| Excepted quantity: | E0 |
| IATA-packing instructions - Passenger: | 203 |
| IATA-max. quantity - Passenger: | 75 kg |
| IATA-packing instructions - Cargo: | 203 |
| IATA-max. quantity - Cargo: | 150 kg |

**Other applicable information (air transport)**

Passenger-LQ: Y204

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

No information available.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

## SECTION 15: Regulatory information

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

**EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3

| | |
|---|---|
| Directive 2010/75/EU on industrial emissions: | No information available. |
| Directive 2004/42/EC on VOC in paints and varnishes: | No information available. |

**Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)
Aerosol Directive (75/324/EEC)

**National regulatory information**

| | |
|---|---|
| Water hazard class (D): | - - non-hazardous to water |

## SECTION 16: Other information

**Changes**

This data sheet contains changes from the previous version in section(s): 1,2,11.

**Abbreviations and acronyms**

Met. Corr: Corrosive to metals
Aerosol: Aerosols
Acute Tox: Acute toxicity
Skin Corr: Skin corrosion
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA: International Air Transport Association
IMDG: International Maritime Code for Dangerous Goods
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 (division of the American Chemical Society)
DNEL/DMEL: Derived No Effect Level / Derived Minimal Effect Level
WEL (UK): Workplace Exposure Limits
TWA (EC): Time-Weighted Average
ATE: Acute Toxicity Estimate
STEL (EC) Short Term Exposure Limit
LC50: Lethal Concentration
EC50: half maximal Effective Concentration
ErC50: means EC50 in terms of reduction of growth rate

**Classification for mixtures and used evaluation method according to GB CLP Regulation**

| Classification | Classification procedure |
|---|---|
| Aerosol 3; H229 | On basis of test data |

**Relevant H and EUH statements (number and full text)**

| | |
|---|---|
| H229 | Pressurised container: May burst if heated. |
| H290 | May be corrosive to metals. |

| | |
|---|---|
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |

**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.

*(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*