Safety Data Sheet

according to Regulation (EC) No 1907/2006

5110 Profi Reiniger G15110K05AB

Revision date: 07.05.2018
Product code: 1101522

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

1.1. Product identifier
5110 Profi Reiniger G15110K05AB

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

Use of the substance/mixture
Cleaner

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:
Skin corrosion/irritation: Skin Corr. 1
Serious eye damage/eye irritation: Eye Dam. 1

Hazard Statements:
Causes severe skin burns and eye damage.
Causes serious eye damage.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling
- disodium metasilicate
- caustic potash, potassium hydroxide

Signal word:
Danger

Pictograms:

Hazard statements
H314 Causes severe skin burns and eye damage.

Precautionary statements
- P260 Do not breathe vapours.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P338 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338 IF IN EYES: Take cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER/doctor.
- P405 Store locked up.
2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>112-34-5</td>
<td>2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether</td>
<td>3 - &lt; 5 %</td>
</tr>
<tr>
<td>203-961-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>603-096-00-8</td>
</tr>
<tr>
<td>7320-34-5</td>
<td>Potassium pyrophosphate</td>
<td>3 - &lt; 5 %</td>
</tr>
<tr>
<td>230-785-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>230-785-7</td>
</tr>
<tr>
<td>10213-79-3</td>
<td>disodium metasilicate</td>
<td>1 - &lt; 3 %</td>
</tr>
<tr>
<td>229-912-9</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>229-912-9</td>
</tr>
<tr>
<td>1310-58-3</td>
<td>caustic potash, potassium hydroxide</td>
<td>1 - &lt; 3 %</td>
</tr>
<tr>
<td>215-181-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>215-181-3</td>
</tr>
</tbody>
</table>

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

Labelling for contents according to Regulation (EC) No 648/2004

5 % - < 15 % non-ionic surfactants, < 5 % phosphates, < 5 % amphoteric surfactants, < 5 % anionic surfactants, perfumes (Limonene).

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
- Water fog.
- Foam.
- Carbon dioxide (CO2).
- Extinguishing powder.

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.

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.

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.

6.2. 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)
No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>ppm</th>
<th>mg/m³</th>
<th>fibres/ml</th>
<th>Category</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>112-34-5</td>
<td>2-(2-Butoxyethoxy)ethanol</td>
<td>10</td>
<td>67.5</td>
<td></td>
<td>TWA (8 h)</td>
<td>WEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15</td>
<td>101.2</td>
<td></td>
<td>STEL (15 min)</td>
<td>WEL</td>
</tr>
<tr>
<td>1310-58-3</td>
<td>Potassium hydroxide</td>
<td>-</td>
<td>2</td>
<td></td>
<td>STEL (15 min)</td>
<td>WEL</td>
</tr>
</tbody>
</table>

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.

Observe legal regulations and provisions.

Observe legal regulations and provisions.
SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
Colour: orange
Odour: Lemon

Test method
pH-Value (at 20 °C): 13.15  DIN 19268

Changes in the physical state
Melting point: not determined
Initial boiling point and boiling range: 100 °C
Flash point: > 100 °C  ISO 3679

Flammability
Solid: not applicable
Gas: not applicable

Auto-ignition temperature
Solid: not applicable
Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties
Not oxidising.

Vapour pressure: not determined
Density (at 20 °C): 1.062 g/cm³  DIN 51757
Water solubility: easily soluble

Solubility in other solvents
not determined
Partition coefficient: not determined

Viscosity / dynamic: DIN 53019-1
Viscosity / kinematic:
(at 40 °C) DIN EN ISO 3104
Flow time:
(at 20 °C) DIN EN ISO 2431

Vapour density: not determined
Evaporation rate: not determined

9.2. Other information

Solid content: not determined

SECTION 10: Stability and reactivity

10.1. Reactivity
Possibility of hazardous reactions.

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

10.3. Possibility of hazardous reactions
No hazardous reaction when handled and stored according to provisions.
10.4. Conditions to avoid
Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take precautionary measures against static discharges.

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

<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>
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<tbody>
<tr>
<td>112-34-5</td>
<td>2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether</td>
<td>oral</td>
<td>LD50</td>
<td>5660</td>
<td>Rat</td>
<td></td>
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<tr>
<td></td>
<td></td>
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<td>mg/kg</td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>4120</td>
<td>Rabbit</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7320-34-5</td>
<td>Potassium pyrophosphate</td>
<td>oral</td>
<td>LD50</td>
<td>&gt;5000</td>
<td>Rat</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>&gt;2000</td>
<td>Rabbit</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalation (4 h) aerosol</td>
<td>LC50</td>
<td>&gt;5 mg/l</td>
<td>Rat</td>
<td></td>
</tr>
<tr>
<td>10213-79-3</td>
<td>disodium metasilicate</td>
<td>oral</td>
<td>LD50</td>
<td>1152-1349 mg/kg</td>
<td>Rat</td>
<td></td>
</tr>
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<td>mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>&gt;5000</td>
<td>Rat</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1310-58-3</td>
<td>caustic potash, potassium hydroxide</td>
<td>oral</td>
<td>LD50</td>
<td>273</td>
<td>Rat</td>
<td>RTECS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Irritation and corrosivity
Causes severe skin burns and eye damage.

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

Carcinogenic/mutagenic/toxic effects for reproduction
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.

Specific effects in experiment on an animal
No information available.

SECTION 12: Ecological information

12.1. Toxicity
The product is not: Ecotoxic.

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Aquatic toxicity</th>
<th>Dose [h]</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>112-34-5</td>
<td>2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether</td>
<td>Acute algae toxicity</td>
<td>EC50 mg/l</td>
<td>&gt; 100</td>
<td>Scenedesmus sp.</td>
</tr>
<tr>
<td>112-34-5</td>
<td>2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether</td>
<td>Acute crustacea toxicity</td>
<td>EC50 mg/l</td>
<td>&gt; 100</td>
<td>Daphnia magna</td>
</tr>
<tr>
<td>7320-34-5</td>
<td>Potassium pyrophosphate</td>
<td>Acute fish toxicity</td>
<td>LC50 mg/l</td>
<td>&gt; 100</td>
<td>Oncorhynchus mykiss (Rainbow trout)</td>
</tr>
<tr>
<td>7320-34-5</td>
<td>Potassium pyrophosphate</td>
<td>Acute algae toxicity</td>
<td>ErC50 mg/l</td>
<td>&gt; 100</td>
<td>Selenastrum capricornutum</td>
</tr>
<tr>
<td>7320-34-5</td>
<td>Potassium pyrophosphate</td>
<td>Acute crustacea toxicity</td>
<td>EC50 mg/l</td>
<td>&gt; 100</td>
<td>Daphnia magna (Big water flea)</td>
</tr>
<tr>
<td>1310-58-3</td>
<td>Caustic potash, potassium hydroxide</td>
<td>Acute fish toxicity</td>
<td>LC50 mg/l</td>
<td>80</td>
<td>Gambusia affinis</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>112-34-5</td>
<td>2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether</td>
<td>0,56 (25°C)</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
Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

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
070701  WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; aqueous washing liquids and mother liquors; hazardous waste

Waste disposal number of used product
070701  WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; aqueous washing liquids and mother liquors; hazardous waste

Waste disposal number of contaminated packaging
150110  WASTE PACKAGING; ABSORBENTS, WIPE 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
Water (with cleaning agent). Completely emptied packages can be recycled.

SECTION 14: Transport information

Land transport (ADR/RID)
14.1. UN number: UN 1719
14.2. UN proper shipping name: CAUSTIC ALKALI LIQUID, N.O.S. (caustic potash, potassium hydroxide, disodium metasilicate)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
   Hazard label: 8
   Classification code: C5
   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 1719
14.2. UN proper shipping name: CAUSTIC ALKALI LIQUID, N.O.S. (caustic potash, potassium hydroxide, disodium metasilicate)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
   Hazard label: 8
   Classification code: C5
   Special Provisions: 274
   Limited quantity: 5 L
   Excepted quantity: E1

Marine transport (IMDG)
14.1. UN number: UN 1719
14.2. UN proper shipping name: CAUSTIC ALKALI LIQUID, N.O.S. (caustic potash, potassium hydroxide, disodium metasilicate)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8
Marine pollutant: no
Special Provisions: 223, 274
Limited quantity: 5 L
Excepted quantity: E1
EmS: F-A, S-B

Air transport (ICAO-TI/IATA-DGR)
UN 1719
CAUSTIC ALKALI LIQUID, N.O.S. (caustic potash, potassium hydroxide, disodium metasilicate)

14.1. UN number: UN 1719
14.2. UN proper shipping name: CAUSTIC ALKALI LIQUID, N.O.S. (caustic potash, potassium hydroxide, disodium metasilicate)
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: no

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
Restrictions on use (REACH, annex XVII):
Entry 55: 2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether
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
Water contaminating class (D): 2 - clearly water contaminating

SECTION 16: Other information

Changes
This data sheet contains changes from the previous version in section(s): 2,4,5,7,8,9,10,11,13,14,16.

Abbreviations and acronyms
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
Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

<table>
<thead>
<tr>
<th>Classification</th>
<th>Classification procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corr. 1; H314</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>Eye Dam. 1; H318</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Relevant H and EUH statements (number and full text)

- **H290**: May be corrosive to metals.
- **H302**: Harmful if swallowed.
- **H314**: Causes severe skin burns and eye damage.
- **H319**: Causes serious eye irritation.
- **H335**: May cause respiratory irritation.

Further Information

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]: Calculation method.

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 hazardous ingredients were taken respectively from the last version of the sub-contractor’s safety data sheet.)