according to UK REACH Regulation

| 118 Leakage | Detector | MP11800400AB |
|-------------|----------|--------------|
|-------------|----------|--------------|

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

1.1. Product identifier

118 Leakage Detector MP11800400AB

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

Use of the substance/mixture

test substance

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 | 111 NHS (National Health Service) | |
| numbori | | |

number:

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Hazard categories: Aerosol: Aerosol 3 Hazard Statements: Pressurised container: May burst if heated.

2.2. Label elements

GB CLP Regulation Signal word:

I: 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. |

Special labelling of certain mixtures

< 1 % by mass of the contents are flammable.

2.3. Other hazards

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

according to UK REACH Regulation

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Hazardous components

| CAS No | Chemical name | | | Quantity |
|----------|--------------------|----------|----------|-----------|
| | EC No | Index No | REACH No | |
| | GHS Classification | | | |
| 124-38-9 | carbon dioxide | | | 1 - < 3 % |
| | 204-696-9 | | | |
| | | | | |

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

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

< 5 % anionic surfactants, < 5 % amphoteric surfactants.

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

Non-flammable.

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.

according to UK REACH Regulation

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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.

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

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

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

Revision No: 1,06 - Replaces version: 1,05

according to UK REACH Regulation

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Exposure limits (EH40)

| CAS No | Substance | ppm | mg/m³ | fibres/ml | Category | Origin |
|----------|--------------------------------|-------|-------|-----------|---------------|--------|
| 124-38-9 | Carbon dioxide | 5000 | 9150 | | TWA (8 h) | WEL |
| | | 15000 | 27400 | | STEL (15 min) | WEL |
| 57-55-6 | Propane-1,2-diol, particulates | - | 10 | | TWA (8 h) | WEL |

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. 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: 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: | Aerosol |
|-----------------|----------------|
| Colour: | colourless |
| Odour: | characteristic |

Changes in the physical state Melting point/freezing point:

not determined

Test method

according to UK REACH Regulation

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| Boiling point or initial boiling point and | 100 °C | |
| boiling range: Sublimation point: | No information available. | |
| Softening point: | No information available. | |
| Flash point: | 113 °C | |
| Flammability | | |
| Solid/liquid: | not applicable | |
| Gas: | not applicable | |
| Lower explosion limits: | 2,6 | |
| Upper explosion limits: | 12,6 | |
| Auto-ignition temperature: | No information available. | |
| Self-ignition temperature | | |
| Solid: | not applicable | |
| Gas: | not applicable | |
| Decomposition temperature: | not determined | D IN (40000 |
| pH-Value (at 20 °C): | - , - | DIN 19268 |
| Viscosity / dynamic: | No information available. | |
| Viscosity / kinematic: | No information available. | |
| Flow time: | No information available. | |
| Water solubility: | easily soluble | |
| Solubility in other solvents not determined | | |
| Partition coefficient n-octanol/water: | not determined | |
| Vapour pressure: | not determined | |
| Density: | 1,03 g/cm³ | DIN 51757 |
| Relative vapour density: | not determined | |
| 9.2. Other information | | |
| Information with regard to physical hazard cla | sses | |
| Oxidizing properties Not oxidising. | | |
| Other safety characteristics | | |
| Solvent separation test: | No information available. | |
| Solvent content: | No information available. | |
| Solid content: | not determined | |
| Evaporation rate: | not determined | |
| Further Information | | |
| Data apply to technical substance: Relative dens | ity, Colour, Odour, Viscosity, pH. | |
| 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

according to UK REACH Regulation

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

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. 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 hazard classes as defined in GB CLP Regulation

Toxicocinetics, metabolism and distribution

No information available.

Acute toxicity

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

Irritation and corrosivity

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

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.

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

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.

according to UK REACH Regulation

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12.7. Other adverse effects

No information available.

Further information

Avoid release to the environment.

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

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) | |
| <u>14.1. UN number or ID number:</u> | UN 1950 |
| 14.2. UN proper shipping name: | AEROSOLS |
| | |

according to UK REACH Regulation

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| 14.3. Transport hazard class(es): | 2.2 | |
| <u>14.4. Packing group:</u> | - | |
| Hazard label: | 2.2 | |
| Marine pollutant: | no | |
| Special Provisions: | 63, 190, 277, 327, 344, 959 | |
| Limited quantity: | 1000 mL | |
| Excepted quantity: EmS: | E0 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 203 | |
| IATA-packing instructions - Cargo: IATA-max. quantity - Cargo: | 203 150 kg | |
| 14.5. Environmental hazards | | |
| ENVIRONMENTALLY HAZARDOUS: | No | |
| 14.6. Special precautions for user | | |
| No information available. | | |
| 14.7. Maritime transport in bulk according to | MO instruments | |
| not applicable | | |
| SECTION 15: Regulatory information | | |
| | lations logislation execting for the substance or minture | |
| | ations/legislation specific for the substance or mixture | |
| EU regulatory information | | |
| Restrictions on use (REACH, annex XVII): | | |
| Entry 3 | | |
| 2010/75/EU (VOC): | No information available. | |
| 2004/42/EC (VOC): | No information available. | |
| Additional information | | |
| Safety Data Sheet according to Regula Aerosol directive (75/324/EEC) | tion (EC) No. 1907/2006 (REACH) | |
| National regulatory information | | |
| Water hazard class (D): | 1 - slightly hazardous to water | |
| SECTION 16: Other information | | |

This data sheet contains changes from the previous version in section(s): 9.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement

according to UK REACH Regulation

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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 Or | Dn basis of test data |

Relevant H and EUH statements (number and full text)

Pressurised container: May burst if heated.

Further Information

H229

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.)