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

1.1. Product identifier

103 Penetrating oil MP10300400AB

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

Use of the substance/mixture

rust remover

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:
- Aerosol: Aerosol 1
- Aspiration hazard: Asp. Tox. 1

Hazard Statements:
- Extremely flammable aerosol.
- Pressurised container: May burst if heated.
- May be fatal if swallowed and enters airways.

2.2. Label elements

Regulation (EC) No. 1272/2008

Signal word: Danger

Pictograms:

Hazard statements

H222 Extremely flammable aerosol.
H29 Pressurised container: May burst if heated.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P251 Do not pierce or burn, even after use.

Special labelling of certain mixtures

EUH066 Repeated exposure may cause skin dryness or cracking.

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

**Hazardous components**

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Quantity</th>
<th>GHS Classification</th>
<th>EC No</th>
<th>Index No</th>
<th>REACH No</th>
</tr>
</thead>
<tbody>
<tr>
<td>64742-48-9</td>
<td>Hydrocarbons, C10 - C13, n-alkanes, iso-alkanes, cyclics, &lt; 2 % aromates</td>
<td>50 - &lt;= 100 %</td>
<td>A1; H304 EUH066</td>
<td>918-481-9</td>
<td>01-2119457273-39</td>
<td></td>
</tr>
<tr>
<td>75-28-5</td>
<td>isobutane</td>
<td>25 - &lt; 50 %</td>
<td>Flam. Gas 1, Liquefied gas; H220 H280</td>
<td>200-857-2</td>
<td>601-004-00-0</td>
<td>01-2119485395-27</td>
</tr>
<tr>
<td>74-98-6</td>
<td>propane</td>
<td>3 - &lt; 5 %</td>
<td>Flam. Gas 1, Liquefied gas; H220 H280</td>
<td>200-827-9</td>
<td>601-003-00-5</td>
<td>01-2119486944-21</td>
</tr>
<tr>
<td>106-97-8</td>
<td>butane</td>
<td>1 - &lt; 3 %</td>
<td>Flam. Gas 1, Liquefied gas; H220 H280</td>
<td>203-448-7</td>
<td>601-004-00-0</td>
<td>01-2119474691-32</td>
</tr>
</tbody>
</table>

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

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

>= 30 % aliphatic hydrocarbons.

### 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
Full 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
Danger of bursting container.

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

Advice on protection against fire and explosion
Keep away from sources of ignition - No smoking. Heating causes rise in pressure with risk of bursting.

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**
Protect from frost. Protect against 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)**

<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>106-97-8</td>
<td>Butane</td>
<td>600</td>
<td>1450</td>
<td></td>
<td>TWA (8 h)</td>
<td>WEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>750</td>
<td>1810</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: AX
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: weak

pH-Value (at 20 °C): not determined

Changes in the physical state
Melting point: not determined
Initial boiling point and boiling range: -40 °C
Flash point: > 61 °C

Flammability
Solid: not applicable
Gas: not applicable

Lower explosion limits: not determined
Upper explosion limits: 9,4

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): 0,792 g/cm³ DIN 51757

Water solubility: The study does not need to be conducted because the substance is known to be insoluble in water.

Solubility in other solvents
not determined

Partition coefficient: not determined

Viscosity / kinematic: 1,3 mm²/s

Vapour density: not determined

Evaporation rate: not determined

9.2. Other information

Solid content: not determined

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

SECTION 10: Stability and reactivity
### 10.1. Reactivity
Extremely flammable aerosol.

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

### 10.3. Possibility of hazardous reactions
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 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>
</tr>
</thead>
<tbody>
<tr>
<td>64742-48-9</td>
<td>Hydrocarbons, C10 - C13, n-alkanes, iso-alkanes, cyclics, &lt; 2 % aromates</td>
<td>oral</td>
<td>LD50</td>
<td>&gt;8000 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>&gt;3160 mg/kg</td>
<td>Rabbit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalation (4 h) vapour</td>
<td>LC50</td>
<td>4951 mg/l</td>
<td>Rat</td>
</tr>
<tr>
<td>75-28-5</td>
<td>isobutane</td>
<td>inhalation vapour</td>
<td>LC50</td>
<td>1237 mg/l</td>
<td>Mouse.</td>
</tr>
<tr>
<td>106-97-8</td>
<td>butane</td>
<td>inhalation (4 h) gas</td>
<td>LC50</td>
<td>658 ppm</td>
<td>Rat</td>
</tr>
</tbody>
</table>

**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 indication of human carcinogenicity.
- 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
Repeated exposure may cause skin dryness or cracking.

### 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
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

<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>
</tr>
</thead>
<tbody>
<tr>
<td>64742-48-9</td>
<td>Hydrocarbons, C10 - C13, n-alkanes, iso-alkanes, cyclics, &lt; 2 % aromates</td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>&gt;1000 mg/l</td>
<td>96 h</td>
<td>Oncorhynchus mykiss</td>
<td>USEPA OPPT Risk Assessment Division (200)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute algae toxicity</td>
<td>ErC50</td>
<td>&gt;1000 mg/l</td>
<td>96 h</td>
<td>Scenedesmus subspicatus</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute crustacea toxicity</td>
<td>EC50</td>
<td>&gt;1000 mg/l</td>
<td>48 h</td>
<td>Daphnia magna</td>
<td></td>
</tr>
<tr>
<td>75-28-5</td>
<td>isobutane</td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>91,42 mg/l</td>
<td>96 h</td>
<td>Fish, no other information</td>
<td>USEPA OPPT Risk Assessment Division (200)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute algae toxicity</td>
<td>ErC50</td>
<td>19,37 mg/l</td>
<td>96 h</td>
<td>Algae</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute crustacea toxicity</td>
<td>EC50</td>
<td>69,43 mg/l</td>
<td>48 h</td>
<td>Daphnia sp.</td>
<td></td>
</tr>
<tr>
<td>74-98-6</td>
<td>propane</td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>49,9 mg/l</td>
<td>96 h</td>
<td>Fish, no other information</td>
<td>USEPA OPPT Risk Assessment Division (200)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute algae toxicity</td>
<td>ErC50</td>
<td>19,37 mg/l</td>
<td>96 h</td>
<td>Algae</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute crustacea toxicity</td>
<td>EC50</td>
<td>69,43 mg/l</td>
<td>48 h</td>
<td>Daphnia sp.</td>
<td></td>
</tr>
<tr>
<td>106-97-8</td>
<td>butane</td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>49,9 mg/l</td>
<td>96 h</td>
<td>Fish, no other information</td>
<td>USEPA OPPT Risk Assessment Division (200)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute algae toxicity</td>
<td>ErC50</td>
<td>19,37 mg/l</td>
<td>96 h</td>
<td>Algae</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute crustacea toxicity</td>
<td>EC50</td>
<td>69,43 mg/l</td>
<td>48 h</td>
<td>Daphnia sp.</td>
<td></td>
</tr>
</tbody>
</table>

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

### 12.3. Bioaccumulative potential

Revision No: 1,15 - Replaces version: 1,14

GB - EN

Revision date: 11.03.2019
The product has not been tested.

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-28-5</td>
<td>isobutane</td>
<td>1.09</td>
</tr>
<tr>
<td>74-98-6</td>
<td>propane</td>
<td>1.09</td>
</tr>
<tr>
<td>106-97-8</td>
<td>butane</td>
<td>1.09</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. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

**Waste disposal number of waste from 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

**Waste disposal number of 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

**Waste disposal number of 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**

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information**

**14.1. UN number:**

UN 1950

**14.2. UN proper shipping name:**

AEROSOLS

**14.3. Transport hazard class(es):**

2

**14.4. Packing group:**

-

**Hazard label:**

2.1

**Classification code:**

5F

**Special Provisions:**

190 327 344 625

**Limited quantity:**

1 L

**Excepted quantity:**

E0
| Transport category: | 2 |
| Tunnel restriction code: | D |

### Inland waterways transport (ADN)

| 14.1. UN number: | UN 1950 |
| 14.2. UN proper shipping name: | AEROSOLS |
| 14.3. Transport hazard class(es): | 2 |
| 14.4. Packing group: | - |
| Hazard label: | 2.1 |
| Classification code: | 5F |
| Special Provisions: | 190 327 344 625 |
| Limited quantity: | 1 L |
| Excepted quantity: | E0 |

### Marine transport (IMDG)

| 14.1. UN number: | UN 1950 |
| 14.2. UN proper shipping name: | AEROSOLS |
| 14.3. Transport hazard class(es): | 2.1 |
| 14.4. Packing group: | - |
| Hazard label: | 2.1 |
| Marine pollutant: | no |
| Special Provisions: | 63, 190, 277, 327, 344, 381,959 |
| Limited quantity: | 1000 mL |
| Excepted quantity: | E0 |
| EmS: | F-D, S-U |

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

| 14.1. UN number: | UN 1950 |
| 14.2. UN proper shipping name: | AEROSOLS, flammable |
| 14.3. Transport hazard class(es): | 2.1 |
| 14.4. Packing group: | - |
| Hazard label: | 2.1 |
| Special Provisions: | A145 A167 A802 |
| Limited quantity Passenger: | 30 kg G |
| Passenger LQ: | Y203 |
| Excepted quantity: | E0 |

### 14.5. Environmental hazards

- ENVIRONMENTALLY HAZARDOUS: no

### 14.6. Special precautions for user

- No information available.

### 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 28: Hydrocarbons, C10 - C13, n-alkanes, iso-alkanes, cyclics, < 2 % aromates; isobutane; butane

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)
Aerosol directive (75/324/EEC)

National regulatory information
Employment restrictions:
Observe restrictions to employment for juveniles according to the ‘juvenile work protection guideline’ (94/33/EC).

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): 3, 15, 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 (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA: International Air Transport Association
IMDG: International Maritime Code for Dangerous Goods
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

Relevant H and EUH statements (number and full text)
H220 Extremely flammable gas.
H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.
EUH066 Repeated exposure may cause skin dryness or cracking.

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.
### 103 Penetrating oil MP10300400AB

Product code: 1101050

| Print date: 28.06.2019 | Product code: 1101050 |

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