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

1.1. Product identifier
902 Synthetic Oil Fluid MP90200400AB

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

Use of the substance/mixture
Lubricant

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
Hazard Statements:
Extremely flammable aerosol.
Pressurised container: May burst if heated.

2.2. Label elements
Regulation (EC) No. 1272/2008
Signal word: Danger
Pictograms:

Hazard statements
H222 Extremely flammable aerosol.
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.
P211 Do not spray on an open flame or other ignition source.
P260 Do not breathe Aerosol.
P271 Use only outdoors or in a well-ventilated area.
P314 Get medical advice/attention if you feel unwell.
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. 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>EC No</th>
<th>Index No</th>
<th>REACH No</th>
<th>GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-28-5</td>
<td>isobutane</td>
<td>50 - &lt;= 100 %</td>
<td></td>
<td></td>
<td></td>
<td>Flam. Gas 1, Liquefied gas; H220 H280</td>
</tr>
<tr>
<td>200-857-2</td>
<td></td>
<td></td>
<td>601-004-00-0</td>
<td>01-2119485395-27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>68037-01-4</td>
<td>Dec-1-ene, homopolymer, hydrogenated</td>
<td>25 - &lt; 50 %</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>500-183-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>01-2119486452-34</td>
<td>Asp. Tox. 1; H304</td>
</tr>
<tr>
<td>74-98-6</td>
<td>propane</td>
<td>5 - &lt; 10 %</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200-827-9</td>
<td></td>
<td></td>
<td>601-003-00-5</td>
<td>01-2119486944-21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>106-97-8</td>
<td>butane</td>
<td>1 - &lt; 3 %</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>203-448-7</td>
<td></td>
<td></td>
<td>601-004-00-0</td>
<td>01-2119474691-32</td>
<td></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.

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
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. 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
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
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: mild

pH-Value (at 20 °C): not determined

Test method: DIN 19268

Changes in the physical state
Melting point: not determined
Initial boiling point and boiling range: -42 °C
Flash point: -80 °C

Flammability
Solid: not applicable
Gas: not applicable

Lower explosion limits: 1,5
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): 0,828 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
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
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 toxicological effects
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.

<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>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>68037-01-4</td>
<td>Dec-1-ene, homopolymer, hydrogenated</td>
<td>oral</td>
<td>LD50</td>
<td>&gt; 5000 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>&gt; 2000 mg/kg</td>
<td>Rabbit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalation (4 h) aerosol</td>
<td>LC50</td>
<td>&gt; 5.2 mg/l</td>
<td>Rat</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>GESTIS</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
Based on available data, the classification criteria are not met.

Aspiration hazard
Based on available data, the classification criteria are not met.
### 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</th>
<th>[h]</th>
<th>[d]</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<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>
</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>
</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>
</tr>
<tr>
<td>68037-01-4</td>
<td>Dec-1-ene, homopolymer, hydrogenated</td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>&gt; 1000 mg/l</td>
<td>96 h</td>
<td>Oncorhynchus mykiss (Rainbow trout)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute algae toxicity</td>
<td>ErC50</td>
<td>&gt;1000 mg/l</td>
<td>72 h</td>
<td>Scenedesmus subspicatus</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>
</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>
</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>
</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>
</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>
</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>
</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>
</tr>
</tbody>
</table>

#### 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.

12.6. Other adverse effects
No information available.

Further information
Avoid release to the environment.

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
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
Completely emptied packages can be recycled.

SECTION 14: Transport information

Land transport (ADR/RID)

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)

- **UN number:** UN 1950
- **UN proper shipping name:** AEROSOLS
- **Transport hazard class(es):** 2
- **Packing group:** -  
  - Hazard label: 2, see SP63  
  - Marine pollutant: no  
  - Special Provisions: 63, 190, 277, 327, 344, 959  
  - Limited quantity: See SP277  
  - Excepted quantity: E0  
  - EmS: F-D, S-U

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

- **UN number:** UN 1950
- **UN proper shipping name:** AEROSOLS, flammable
- **Transport hazard class(es):** 2.1
- **Packing group:** -  
  - Hazard label: 2.1  
  - Special Provisions: 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

### 14.5. Environmental hazards
ENVIRONMENTALLY HAZARDOUS: no

### 14.6. Special precautions for user
Warning: Flammable gases.

### 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: isobutane; butane

- 2010/75/EU (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

Water contaminating class (D): 1 - slightly water contaminating

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,3,7,10,11,14,15.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
IMDG: International Maritime Code for Dangerous Goods by Road
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)

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.

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