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

1.1. Product identifier

927 All Season Windscreen Cleaner MP92701000AB

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
Fax: +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:

- Flammable liquid: Flam. Liq. 2
- Serious eye damage/eye irritation: Eye Irrit. 2

Hazard Statements:

- Highly flammable liquid and vapour.
- Causes serious eye irritation.

2.2. Label elements

Regulation (EC) No. 1272/2008

Signal word: Danger

Pictograms:

Hazard statements

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.

Precautionary statements

P102 Keep out of reach of children.
P101 If medical advice is needed, have product container or label at hand.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear eye protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P312 Call a POISON CENTER/doctor if you feel unwell.
P501 Dispose of contents/container according to the official regulations.
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>
<th>EC No</th>
<th>Index No</th>
<th>REACH No</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>ethanol</td>
<td>50 - &lt;= 100 %</td>
<td>200-578-6</td>
<td>603-002-00-5</td>
<td>01-2119457610-43</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Flam. Liq. 2, Eye Irrit. 2; H225 H319</td>
</tr>
<tr>
<td>107-21-1</td>
<td>ethanediol, ethylene glycol</td>
<td>5 - &lt; 10 %</td>
<td>203-473-3</td>
<td></td>
<td>01-2119456816-28</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4, STOT RE 2; H302 H373</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 % anionic surfactants, < 5 % non-ionic surfactants, perfumes.

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

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.

Additional information
Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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).

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)**
Scheibenfrostschutz

### 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>107-21-1</td>
<td>Ethane-1,2-diol, vapour</td>
<td>20</td>
<td>52</td>
<td></td>
<td>TWA (8 h)</td>
<td>WEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40</td>
<td>104</td>
<td></td>
<td>STEL (15 min)</td>
<td>WEL</td>
</tr>
<tr>
<td>64-17-5</td>
<td>Ethanol</td>
<td>1000</td>
<td>1920</td>
<td></td>
<td>TWA (8 h)</td>
<td>WEL</td>
</tr>
</tbody>
</table>

**Additional advice on limit values**
- a no restriction
- b End of exposure or shift
- c in long-term exposure: after several shifts
- d prior to next shift

TWA (EC): time-weighted average
U: Urea
B: Blood

#### 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.
### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>blue</td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td>Zitrone</td>
<td></td>
</tr>
<tr>
<td>pH-Value (at 20 °C):</td>
<td>10.4 DIN 19268</td>
<td></td>
</tr>
<tr>
<td>Changes in the physical state</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting point</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>78 °C</td>
<td></td>
</tr>
<tr>
<td>Sublimation point</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Softening point</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>21.5 °C ISO 3679</td>
<td></td>
</tr>
<tr>
<td>Flammability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solid</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Gas</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Lower explosion limits</td>
<td>3.5 vol. %</td>
<td></td>
</tr>
<tr>
<td>Upper explosion limits</td>
<td>15 vol. %</td>
<td></td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>400 °C</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solid</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Gas</td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not oxidising</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Density (at 20 °C):</td>
<td>0.9 g/cm³ DIN 51757</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>completely miscible</td>
<td></td>
</tr>
</tbody>
</table>

### 9.2. Other information

- Not oxidising.
- Vapour pressure: not determined
- Vapour pressure: No information available.
- Density (at 20 °C): 0.9 g/cm³ DIN 51757
- Water solubility: completely miscible
SECTION 10: Stability and reactivity

10.1. Reactivity
Flammable.

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.

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>64-17-5</td>
<td>ethanol</td>
<td>oral</td>
<td>LD50</td>
<td>6200 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>&gt;20000 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalation (4 h) vapour</td>
<td>LC50</td>
<td>95,6 mg/l</td>
<td>Rat</td>
</tr>
<tr>
<td>107-21-1</td>
<td>ethanediol, ethylene glycol</td>
<td>oral</td>
<td>LD50</td>
<td>1600 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>&gt;3500 mg/kg</td>
<td>Rabbit</td>
</tr>
</tbody>
</table>

Irritation and corrosivity
Causes serious eye irritation.
Skin corrosion/irritation: Based on available data, the classification criteria are not met.
No information available.

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.

**Additional information on tests**
The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

### SECTION 12: Ecological information

#### 12.1. Toxicity
There are no data available on the mixture itself.

<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>64-17-5</td>
<td>ethanol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>14200 mg/l</td>
<td>96</td>
<td>Pimephales promelas (fathead minnow)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute crustacea toxicity</td>
<td>EC50 mg/l</td>
<td>9268 - 14221</td>
<td>48</td>
<td>Daphnia magna</td>
<td>IUCLID</td>
</tr>
<tr>
<td>107-21-1</td>
<td>ethanediol, ethylene glycol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>72860 mg/l</td>
<td>96</td>
<td>Pimephales promelas</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute algae toxicity</td>
<td>ErC50  mg/l</td>
<td>6500 - 13000</td>
<td>96</td>
<td>Selenastrum capricornutum</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute crustacea toxicity</td>
<td>EC50 mg/l</td>
<td>&gt; 100 mg/l</td>
<td>48</td>
<td>Daphnia magna</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fish toxicity</td>
<td>NOEC</td>
<td>72860 mg/l</td>
<td>7</td>
<td>Pimephales promelas</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Crustacea toxicity</td>
<td>NOEC</td>
<td>8590 mg/l</td>
<td>7</td>
<td>Ceriodaphnia spec</td>
<td></td>
</tr>
</tbody>
</table>

#### 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.

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>ethanol</td>
<td>-0,31</td>
</tr>
<tr>
<td>107-21-1</td>
<td>ethanediol, ethylene glycol</td>
<td>-1,36</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
This chemical is a VOC according to 99/13/EC.
Further information
No special environmental measures are necessary.

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
070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste

Waste disposal number of used product
070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste

Waste disposal number of contaminated packaging
150110 WASTE PACKAGING; ABSORBENTS, WIPING 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 1170
14.2. UN proper shipping name: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
14.3. Transport hazard class(es): 3
14.4. Packing group: II

Hazard label: 3
Classification code: F1
Special Provisions: 144 601
Limited quantity: 1 L
Transport category: 2
Hazard No: 33
Tunnel restriction code: D/E

Other applicable information (land transport)
Limited quantity: E2

Inland waterways transport (ADN)

14.1. UN number: UN 1170
14.2. UN proper shipping name: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
14.3. Transport hazard class(es): 3
14.4. Packing group: II

Hazard label: 3
Classification code: F1
Special Provisions: 144 601
Limited quantity: 1 L
### Marine transport (IMDG)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1.</td>
<td>UN number: UN 1170</td>
</tr>
<tr>
<td>14.2.</td>
<td>UN proper shipping name: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)</td>
</tr>
<tr>
<td>14.3.</td>
<td>Transport hazard class(es): 3</td>
</tr>
<tr>
<td>14.4.</td>
<td>Packing group: II</td>
</tr>
<tr>
<td></td>
<td>Special Provisions: 144</td>
</tr>
<tr>
<td></td>
<td>Limited quantity: 1 L</td>
</tr>
<tr>
<td></td>
<td>EmS: F-E, S-D</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1.</td>
<td>UN number: UN 1170</td>
</tr>
<tr>
<td>14.2.</td>
<td>UN proper shipping name: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)</td>
</tr>
<tr>
<td>14.3.</td>
<td>Transport hazard class(es): 3</td>
</tr>
<tr>
<td>14.4.</td>
<td>Packing group: II</td>
</tr>
<tr>
<td></td>
<td>Special Provisions: A3 A58 A180</td>
</tr>
<tr>
<td></td>
<td>Limited quantity Passenger: 1 L</td>
</tr>
</tbody>
</table>

### Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

### Special precautions for user

Warning: Combustible liquids.

### Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable
1 - slightly water contaminating

Additional information

94/69/EC (21st ATP). The benzene content of the product is less than 0.1%. It applies the annotation P.
Classification and labeling as carcinogenic is not necessary.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

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

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)
IMDG: International Maritime Code for Dangerous Goods
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)
H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H373 May cause damage to kidneys through prolonged or repeated exposure by skin contact.

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.)