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

1.1. Product identifier
Trade name/designation:

**Doyen SK 22 E**

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

**Use of the substance/mixture:**
Washing and cleaning products (including solvent based products)

1.3. Details of the supplier of the safety data sheet

**Supplier (manufacturer/importer/only representative/downstream user/distributor):**
etol-Werk Eberhard Tripp GmbH & Co.OHG
Allerheiligenstr. 12
77728 Oppenau
Germany
**Telephone:** +49(0)7804/41-0
**Telefax:** +49(0)7804/41-168
**E-mail:** info@etol.de
**Website:** www.etol.de

1.4. Emergency telephone number

Vergiftungs-Informations-Zentrale Freiburg, 24h: +49(0)76119240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008 [CLP]:**

<table>
<thead>
<tr>
<th>Hazard classes and hazard categories</th>
<th>Hazard statements</th>
<th>Classification procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/eye irritation (Eye Dam. 1)</td>
<td>H318: Causes serious eye damage.</td>
<td></td>
</tr>
</tbody>
</table>

2.2. Label elements

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

**Hazard pictograms:**

- **GHS05**
  - Corrosion

**Signal word:** Danger

**Hazard components for labelling:**
C4-C6 dicarboxylic acids; fatty alcohol alkoxylate 4

<table>
<thead>
<tr>
<th>hazard statements for health hazards</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
</tr>
</tbody>
</table>

**Supplemental Hazard information (EU):**

<table>
<thead>
<tr>
<th>Precautionary statements Prevention</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>P280.6</td>
<td>Wear eye/face protection.</td>
</tr>
</tbody>
</table>
Precautionary statements

Response

P305 + P351 + P338
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310
Immediately call a POISON CENTER/doctor/....

2.3. Other hazards
No data available

SECTION 3: Composition / information on ingredients

3.2. Mixtures
Hazardous ingredients / Hazardous impurities / Stabilisers:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Classification according to Regulation (EC) No 1272/2008 [CL P]</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>fatty alcohol alkoxylate 4</td>
<td>Acute Tox. 4, Eye Irrit. 2, Aquatic Chronic 3</td>
<td>4 – 10 Wt %</td>
</tr>
<tr>
<td></td>
<td>Warning H302-H319-H412</td>
<td></td>
</tr>
<tr>
<td>Zitronensäure-Monohydrat</td>
<td>Eye Irrit. 2</td>
<td>3 – 5 Wt %</td>
</tr>
<tr>
<td></td>
<td>Warning H319</td>
<td></td>
</tr>
<tr>
<td>C4-C6 dicarboxylic acids</td>
<td>Eye Dam. 1</td>
<td>2 – 4 Wt %</td>
</tr>
<tr>
<td></td>
<td>Danger H318</td>
<td></td>
</tr>
<tr>
<td>sodium p-cumenesulphonate</td>
<td>Eye Irrit. 2</td>
<td>2 – 4 Wt %</td>
</tr>
<tr>
<td></td>
<td>Warning H319</td>
<td></td>
</tr>
</tbody>
</table>

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious place in recovery position and seek medical advice. Do not leave affected person unattended. Warning First aider: Pay attention to self-protection!

Following inhalation:
Provide fresh air. In case of respiratory tract irritation, consult a physician.

In case of skin contact:
After contact with skin, wash immediately with plenty of water and soap. If skin irritation or rash occurs: Get medical advice/attention.

After eye contact:
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

After ingestion:
Rinse mouth. Let water be drunken in little sips (dilution effect). Get medical advice/attention if you feel unwell.

Self-protection of the first aider:
Use personal protection equipment.

4.2. Most important symptoms and effects, both acute and delayed
Serious eye damage/eye irritation

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.
SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
- Water
- Carbon dioxide (CO2)
- Extinguishing powder

Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

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

6.1.1. For non-emergency personnel

Personal precautions:
Remove persons to safety.

Protective equipment:
Wear protective gloves/protective clothing/eye protection/face protection.

6.1.2. For emergency responders

Personal protection equipment:
Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment:
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up:
Water (with cleaning agent)

6.4. Reference to other sections

Safe handling: see section 7 Personal protection equipment: see section 8 Disposal: see section 13

6.5. Additional information

Use appropriate container to avoid environmental contamination.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advises on safe handling:
Wear personal protection equipment (refer to section 8).

Fire prevent measures:
No special measures are necessary.

Advises on general occupational hygiene

When using do not eat, drink or smoke. Avoid contact with eyes and skin.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:
Keep container tightly closed in a cool, well-ventilated place.

Storage class: 12 - non-combustible liquids that cannot be assigned to any of the above storage classes
### 7.3. Specific end use(s)
No data available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 8.1.1. Occupational exposure limit values

<table>
<thead>
<tr>
<th>Limit value type (country of origin)</th>
<th>Substance name</th>
<th>①</th>
<th>②</th>
<th>③</th>
<th>④</th>
<th>⑤</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFG (DE) 2-methyl-2H-isothiazol-3-one</td>
<td>CAS No.: 2682-20-4</td>
<td>0.2 mg/m³</td>
<td>0.4 mg/m³</td>
<td></td>
<td>Monitoring and observation processes</td>
<td>einatembare Fraktion (Reaktionsgemisch, bestehend aus5-Chlor-2-methyl-2H-isothiazol-3-on und 2-Methyl-2H-isothiazol-3-on (3:1))</td>
</tr>
</tbody>
</table>

##### 8.1.2. Biological limit values
No data available

##### 8.1.3. DNEL-/PNEC-values

<table>
<thead>
<tr>
<th>Substance name</th>
<th>DNEL value</th>
<th>①</th>
<th>②</th>
</tr>
</thead>
<tbody>
<tr>
<td>C4-C6 dicarboxylic acids CAS No.: 68603-87-2</td>
<td>34 mg/m³</td>
<td>① DNEL worker</td>
<td>② DNEL acute inhalative (systemic)</td>
</tr>
<tr>
<td>C4-C6 dicarboxylic acids CAS No.: 68603-87-2</td>
<td>5 mg/m³</td>
<td>① DNEL worker</td>
<td>② DNEL acute inhalative (local)</td>
</tr>
<tr>
<td>C4-C6 dicarboxylic acids CAS No.: 68603-87-2</td>
<td>34 mg/m³</td>
<td>① DNEL worker</td>
<td>② DNEL long-term inhalative (systemic)</td>
</tr>
<tr>
<td>C4-C6 dicarboxylic acids CAS No.: 68603-87-2</td>
<td>5 mg/m³</td>
<td>① DNEL worker</td>
<td>② DNEL long-term inhalative (local)</td>
</tr>
<tr>
<td>C4-C6 dicarboxylic acids CAS No.: 68603-87-2</td>
<td>5 mg/kg</td>
<td>① DNEL worker</td>
<td>② DNEL acute dermal, short-term (systemic)</td>
</tr>
<tr>
<td>sodium p-cumenesulphonate CAS No.: 28348-53-0</td>
<td>53.6 mg/m³</td>
<td>① DNEL worker</td>
<td>② DNEL long-term inhalative (systemic)</td>
</tr>
<tr>
<td>sodium p-cumenesulphonate CAS No.: 28348-53-0</td>
<td>7.6 mg/kg bw/day</td>
<td>① DNEL worker</td>
<td>② DNEL long-term dermal (systemic)</td>
</tr>
<tr>
<td>Propanediol CAS No.: 57-55-6</td>
<td>10 mg/m³</td>
<td>① DNEL worker</td>
<td>② DNEL acute inhalative (local)</td>
</tr>
<tr>
<td>Propanediol CAS No.: 57-55-6</td>
<td>168 mg/m³</td>
<td>① DNEL worker</td>
<td>② DNEL long-term inhalative (systemic)</td>
</tr>
<tr>
<td>Propanediol CAS No.: 57-55-6</td>
<td>10 mg/m³</td>
<td>① DNEL worker</td>
<td>② DNEL long-term inhalative (local)</td>
</tr>
<tr>
<td>Propanediol CAS No.: 57-55-6</td>
<td>213 mg/kg bw/day</td>
<td>① DNEL worker</td>
<td>② DNEL long-term dermal (systemic)</td>
</tr>
<tr>
<td>Propanediol CAS No.: 57-55-6</td>
<td>85 mg/kg bw/day</td>
<td>① DNEL worker</td>
<td>② DNEL long-term oral (repeated)</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Substance name</th>
<th>PNEC Value</th>
<th>PNEC type</th>
</tr>
</thead>
<tbody>
<tr>
<td>C4-C6 dicarboxylic acids</td>
<td>0.126 mg/l</td>
<td>PNEC aquatic, freshwater</td>
</tr>
<tr>
<td>CAS No.: 68603-87-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C4-C6 dicarboxylic acids</td>
<td>57.5 mg/l</td>
<td>PNEC sewage treatment plant (STP)</td>
</tr>
<tr>
<td>CAS No.: 68603-87-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C4-C6 dicarboxylic acids</td>
<td>0.484 mg/kg</td>
<td>PNEC sediment, freshwater</td>
</tr>
<tr>
<td>CAS No.: 68603-87-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C4-C6 dicarboxylic acids</td>
<td>0.0484 mg/kg</td>
<td>PNEC sediment, marine water</td>
</tr>
<tr>
<td>CAS No.: 68603-87-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium p-cumenesulphonate</td>
<td>0.23 mg/l</td>
<td>PNEC aquatic, freshwater</td>
</tr>
<tr>
<td>CAS No.: 28348-53-0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium p-cumenesulphonate</td>
<td>100 mg/l</td>
<td>PNEC sewage treatment plant (STP)</td>
</tr>
<tr>
<td>CAS No.: 28348-53-0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propanediol</td>
<td>260 mg/l</td>
<td>PNEC aquatic, freshwater</td>
</tr>
<tr>
<td>CAS No.: 57-55-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propanediol</td>
<td>26 mg/l</td>
<td>PNEC aquatic, marine water</td>
</tr>
<tr>
<td>CAS No.: 57-55-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propanediol</td>
<td>20,000 mg/l</td>
<td>PNEC sewage treatment plant (STP)</td>
</tr>
<tr>
<td>CAS No.: 57-55-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propanediol</td>
<td>572 mg/kg</td>
<td>PNEC sediment, freshwater</td>
</tr>
<tr>
<td>CAS No.: 57-55-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propanediol</td>
<td>57.2 mg/kg</td>
<td>PNEC sediment, marine water</td>
</tr>
<tr>
<td>CAS No.: 57-55-6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls

8.2.1. Appropriate engineering controls
No data available

8.2.2. Personal protection equipment

Eye/face protection:
Eye glasses with side protection

8.2.3. Environmental exposure controls
No data available

8.3. Additional information
No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
Physical state: liquid
Colour: colourless
Odour: odourless

Safety relevant basis data

<table>
<thead>
<tr>
<th>parameter</th>
<th>at °C</th>
<th>method</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td></td>
<td></td>
<td>acidic</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td></td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Freezing point</td>
<td></td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>&gt; 90 °C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature (°C):</td>
<td></td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td></td>
<td>not applicable</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td></td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Ignition temperature in °C</td>
<td></td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td></td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Vapour pressure</td>
<td></td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Vapour density</td>
<td></td>
<td>not determined</td>
<td></td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>parameter</th>
<th>at °C</th>
<th>method</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>≈ 1 g/ml</td>
<td>20 °C</td>
<td></td>
</tr>
<tr>
<td>Bulk density</td>
<td></td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Water solubility (g/L)</td>
<td></td>
<td>completely miscible</td>
<td>20 °C</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td></td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td></td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td></td>
<td>not determined</td>
<td>40 °C</td>
</tr>
</tbody>
</table>

9.2. Other information
No data available

SECTION 10: Stability and reactivity

10.1. Reactivity
The product itself does not burn.

10.2. Chemical stability
No data available

10.3. Possibility of hazardous reactions
No data available

10.4. Conditions to avoid
No data available

10.5. Incompatible materials
No data available

10.6. Hazardous decomposition products
No data available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Substance name</th>
<th>Toxicological information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>fatty alcohol alkoxylate 4</td>
<td>LD₅₀ oral: &gt;300 – &lt;2,000 mg/kg (Rat)</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation:
Based on available data, the classification criteria are not met.

Eye damage/irritation:
Causes severe burns.

Respiratory or skin sensitisation:
Based on available data, the classification criteria are not met.

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

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

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.
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006 (REACH)
Revision date: 06-Nov-2015
Print date: 15-Feb-2016
Version: 5
Page 7/9

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SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Substance name</th>
<th>Toxicological information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>fatty alcohol alkoxylate 4</td>
<td>LC\textsubscript{50}: &gt;1 – &lt;10 mg/l 2 d (Leuciscus idus (golden orfe))</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NOEC: &gt;0.1 – &lt;1 mg/l 21 d</td>
</tr>
<tr>
<td>5949-29-1</td>
<td>Zitronensäure-Monohydrat</td>
<td>LC\textsubscript{50}: =440 mg/l 2 d (Leuciscus idus (golden orfe))</td>
</tr>
<tr>
<td>68603-87-2</td>
<td>C4-C6 dicarboxylic acids</td>
<td>LC\textsubscript{50}: &gt;147 – &lt;215 mg/l 4 d (Leuciscus idus (golden orfe))</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EC\textsubscript{50}: =88.4 mg/l 2 d (Daphnia magna (Big water flea))</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EC\textsubscript{50}: =41.9 mg/l 3 d (Scenedesmus subspicatus)</td>
</tr>
<tr>
<td>28348-53-0</td>
<td>sodium p-cumenesulphonate</td>
<td>LC\textsubscript{50}: &gt;100 mg/l 4 d (Oncorhynchus mykiss (Rainbow trout))</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Substance name</th>
<th>Biodegradation</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>5949-29-1</td>
<td>fatty alcohol alkoxylate 4</td>
<td>Yes, rapidly</td>
<td></td>
</tr>
<tr>
<td>68603-87-2</td>
<td>C4-C6 dicarboxylic acids</td>
<td>Yes, rapidly</td>
<td></td>
</tr>
<tr>
<td>28348-53-0</td>
<td>sodium p-cumenesulphonate</td>
<td>Yes, rapidly</td>
<td></td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential
No data available

12.4. Mobility in soil
No data available

12.5. Results of PBT and vPvB assessment
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

13.1.1. Product/Packaging disposal
Waste codes/waste designations according to EWC/AVV

Waste code product:

- 20 01 29 * municipal wastes: Detergents containing dangerous substances

*: Evidence for disposal must be provided.

Waste code packaging:

- 15 01 10 packaging containing residues of or contaminated by dangerous substances

Waste treatment options

Appropriate disposal / Product:
Dispose of waste according to applicable legislation. Consult the appropriate local waste disposal expert about waste disposal.

Appropriate disposal / Package:
Completely emptied packages can be recycled.

13.2. Additional information
No data available
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SECTION 14: Transport information
No dangerous good in sense of these transport regulations.

14.1. UN-No.  
not relevant

14.2. UN proper shipping name  
not relevant

14.3. Transport hazard class(es)  
not relevant

14.4. Packing group  
not relevant

14.5. Environmental hazards  
not relevant

14.6. Special precautions for user  
not relevant

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
not relevant

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU legislation  
No data available

15.1.2. National regulations  
[DE] National regulations
Water hazard class (WGK)  
WGK:  
2 - deutlich wassergefährdend

15.2. Chemical Safety Assessment  
No data available

15.3. Additional information  
No data available

SECTION 16: Other information

16.1. Indication of changes  
No data available

16.2. Abbreviations and acronyms  
No data available

16.3. Key literature references and sources for data  
No data available
Doyen SK 22 E

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

<table>
<thead>
<tr>
<th>Hazard classes and hazard categories</th>
<th>Hazard statements</th>
<th>Classification procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>H318: Causes serious eye damage.</td>
<td></td>
</tr>
</tbody>
</table>

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

<table>
<thead>
<tr>
<th>Hazard statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
</tr>
<tr>
<td>H318</td>
</tr>
<tr>
<td>H319</td>
</tr>
<tr>
<td>H412</td>
</tr>
</tbody>
</table>

H302 Harmful if swallowed.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

16.6. Training advice
No data available

16.7. Additional 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.