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

- **Product identifier**
- **Trade name:** 13 012203 AUTOSOL® Cleaner for Drilling and Cutting Oils
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use**
  - SU22  Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- **Application of the substance / the mixture**
  - Cleaning agent/ Cleaner
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Autosol, LLC
  - P.O. Box 340358
  - Austin, TX 78734
  - Tel.: 1-512-804-9337
  - www.autosol.com
- **Further information obtainable from:**
  - msds@autosol.com
- **Emergency telephone number:**
  - 1-512-804-9337 or 1-800-314-5545 Toll Free US and Canada

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
  - GHS05 corrosion
  - Skin Corr. 1B H314 Causes severe skin burns and eye damage.
  - GHS07
  - STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
  - C; Corrosive
  - R34: Causes burns.
  - Xn; Harmful
  - R20/22: Harmful by inhalation and if swallowed.
  - Xi; Irritant
  - R37: Irritating to respiratory system.

(Contd. on page 2)
Safety data sheet
according to 1907/2006/EC, Article 31

Trade name: 13 012203 AUTOSOL® Cleaner for Drilling and Cutting Oils

· Information concerning particular hazards for human and environment:
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· Classification system:
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

· Label elements
· Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.
· Hazard pictograms

![GHS05 GHS07]

· Signal word Danger

· Hazard-determining components of labelling:
2-aminoethanol

· Hazard statements
H314 Causes severe skin burns and eye damage.
H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

· Precautionary statements
P102 Keep out of reach of children.
P280 Wear protective gloves / eye protection.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
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 or doctor/physician.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Additional information:
Keep out of reach of children.
Contains but-2-ylene-1,4-diol. May produce an allergic reaction.

· Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.

3 Composition/Information on ingredients
· Chemical characterization: Mixtures
· Description: Mixture of substances listed below with nonhazardous additions.
Safety data sheet
according to 1907/2006/EC, Article 31

Trade name: 13 012203 AUTOSOL® Cleaner for Drilling and Cutting Oils

- Dangerous components:

<table>
<thead>
<tr>
<th>CAS:</th>
<th>EINECS:</th>
<th>Component</th>
<th>% in product</th>
<th>Health hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>141-43-5</td>
<td>205-483-3</td>
<td>2-aminoethanol</td>
<td>10-25%</td>
<td>R34; Xn R20/21/22; H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Corr. 1B, H315; Eye Irrit. 2, H319</td>
</tr>
<tr>
<td>111-76-2</td>
<td>203-905-0</td>
<td>2-butoxyethanol</td>
<td>1-10%</td>
<td>Xn R20/21/22; Xi R36/38; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319</td>
</tr>
<tr>
<td>110-65-6</td>
<td>203-788-6</td>
<td>but-2-yne-1,4-diol</td>
<td>≤ 1.0%</td>
<td>T R23/25; C R34; Xn R21-48/22; Xi R43; Acute Tox. 3, H301; Acute Tox. 3, H331; STOT RE 2, H373; Skin Corr. 1B, H314; Acute Tox. 4, H312; Skin Sens. 1, H317</td>
</tr>
</tbody>
</table>

- Additional information: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- Description of first aid measures
- General information:
  Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- After inhalation:
  Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
  In case of unconsciousness place patient stably in side position for transportation.
- After skin contact:
  Immediately wash with water and soap and rinse thoroughly.
- After eye contact:
  Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing:
  Call for a doctor immediately. Drink plenty of water and provide fresh air. Call for a doctor immediately.
- Information for doctor:
- Most important symptoms and effects, both acute and delayed
  No further relevant information available.
- Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Firefighting measures

- Extinguishing media
- Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture
  In case of fire, the following can be released:
  Nitrogen oxides (NOx)
Safety data sheet  
according to 1907/2006/EC, Article 31

Trade name: 13 012203 AUTOSOL® Cleaner for Drilling and Cutting Oils

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
  Dilute with plenty of water.
  Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Use neutralizing agent.
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
  Ensure good ventilation/exhaustion at the workplace.
- Information about fire - and explosion protection: No special measures required.
- Conditions for safe storage, including any incompatibilities
  - Storage:
    Requirements to be met by storerooms and receptacles: No special requirements.
    Information about storage in one common storage facility: Not required.
    Further information about storage conditions: Keep container tightly sealed.
  - Storage class: 8 B
  - Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
- Control parameters

<table>
<thead>
<tr>
<th>Ingredients with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>141-43-5 2-aminoethanol</strong></td>
</tr>
<tr>
<td>WEL</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Sk</td>
</tr>
</tbody>
</table>
Trade name: 13 012203 AUTOSOL® Cleaner for Drilling and Cutting Oils

111-76-2 2-butoxyethanol

WEL

- Short-term value: 246 mg/m³, 50 ppm
- Long-term value: 123 mg/m³, 25 ppm
Sk, BMGV

Ingredients with biological limit values:

111-76-2 2-butoxyethanol

BMGV

- 240 mmol/mol creatinine
- Medium: urine
- Sampling time: post shift
- Parameter: butoxyacetic acid

Additional information: The lists valid during the making were used as basis.

Exposure controls

- Personal protective equipment:
  - General protective and hygienic measures:
    - The usual precautionary measures are to be adhered to when handling chemicals.
    - Keep away from foodstuffs, beverages and feed.
    - Immediately remove all soiled and contaminated clothing
    - Wash hands before breaks and at the end of work.
    - Avoid contact with the eyes and skin.
  - Respiratory protection:
    - Filter K
    - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
  - Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- Material of gloves
  - Recommended thickness of the material: \( \geq 0.5 \text{ mm} \)
  - Rubber gloves
  - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- Penetration time of glove material
  - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 374 Part 3: Level 6).
## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:**
      - Form: Fluid
      - Colour: Colourless
    - Odour: Characteristic
    - Odour threshold: Not determined.
  - **pH-value at 20 °C:** 11
  - **Change in condition**
    - Melting point/Melting range: Undetermined.
    - Boiling point/Boiling range: 100 °C
  - **Flash point:** Not applicable.
  - **Flammability (solid, gaseous):** Not applicable.
  - **Ignition temperature:**
    - Decomposition temperature: Not determined.
  - **Self-igniting:** Product is not selfigniting.
  - **Danger of explosion:** Product does not present an explosion hazard.
  - **Explosion limits:**
    - Lower: Not determined.
    - Upper: Not determined.
  - **Vapour pressure:** Not determined.
  - **Density at 20 °C:** 1.01 g/cm³
  - **Relative density**
    - Not determined.
  - **Vapour density**
    - Not determined.
  - **Evaporation rate**
    - Not determined.
  - **Solubility in / Miscibility with water:** Fully miscible.
  - **Partition coefficient (n-octanol/water):** Not determined.
  - **Viscosity:**
    - Dynamic: Not determined.
    - Kinematic: Not determined.
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according to 1907/2006/EC, Article 31

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(Contd. of page 6)

10 Stability and reactivity

- Reactivity
- Chemical stability
- Thermal decomposition / conditions to be avoided:
  No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:

<table>
<thead>
<tr>
<th>LD/LC50 values relevant for classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td>141-43-5 2-aminoethanol</td>
</tr>
<tr>
<td>Oral LD50</td>
</tr>
<tr>
<td>2050 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal LD50</td>
</tr>
<tr>
<td>1000 mg/kg (rabbit)</td>
</tr>
<tr>
<td>111-76-2 2-butoxyethanol</td>
</tr>
<tr>
<td>Oral LD50</td>
</tr>
<tr>
<td>1480 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal LD50</td>
</tr>
<tr>
<td>2270 mg/kg (rabbit)</td>
</tr>
<tr>
<td>110-65-6 but-2-yne-1,4-diol</td>
</tr>
<tr>
<td>Oral LD50</td>
</tr>
<tr>
<td>132 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal LD50</td>
</tr>
<tr>
<td>659 mg/kg (rat)</td>
</tr>
<tr>
<td>Inhalative LC50 (4 h)</td>
</tr>
<tr>
<td>0.69 mg/l (rat)</td>
</tr>
</tbody>
</table>

- Primary irritant effect:
  - on the skin: Caustic effect on skin and mucous membranes.
  - on the eye: Strong caustic effect.
  - Sensitization: No sensitizing effects known.

- Additional toxicological information:
  The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  Harmful
  Corrosive
  Irritant
  Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.

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Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological information

· Toxicity

- Aquatic toxicity:

<table>
<thead>
<tr>
<th>Substance</th>
<th>EC50 (48 h)</th>
<th>LC50 (96 h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>141-43-5 2-aminoethanol</td>
<td>65 mg/l (daphnia)</td>
<td>150 mg/l (Oncorhynchus mykiss)</td>
</tr>
<tr>
<td>111-76-2 2-butoxyethanol</td>
<td>1720 mg/l (daphnia)</td>
<td>1490 mg/l (fish)</td>
</tr>
<tr>
<td>110-65-6 but-2-yne-1,4-diol</td>
<td>26.79 mg/l (daphnia)</td>
<td>53.6 mg/l (fish)</td>
</tr>
</tbody>
</table>

- Persistence and degradability: No further relevant information available.
- Behaviour in environmental systems:
- Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.
- Additional ecological information:
- General notes:
  Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
  Must not reach sewage water or drainage ditch undiluted or unneutralized.
  Danger to drinking water if even small quantities leak into the ground.
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- Other adverse effects: No further relevant information available.

13 Disposal considerations

· Waste treatment methods

- Recommendation
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 06 01*</td>
<td>aqueous washing liquids and mother liquors</td>
</tr>
<tr>
<td>07 06 10*</td>
<td>other filter cakes and spent absorbents</td>
</tr>
<tr>
<td>15 01 02</td>
<td>plastic packaging</td>
</tr>
</tbody>
</table>

- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.
Trade name: 13 012203 AUTOSOL® Cleaner for Drilling and Cutting Oils

Recommended cleansing agents: Water, if necessary together with cleansing agents.

14 Transport information

- UN-Number
  - ADR, IMDG, IATA: UN1760

- UN proper shipping name
  - ADR: 1760 CORROSIVE LIQUID, N.O.S. (ETHANOLAMINE)
  - IMDG, IATA: CORROSIVE LIQUID, N.O.S. (ETHANOLAMINE)

- Transport hazard class(es)
  - ADR, IMDG, IATA
    - Class: 8 Corrosive substances.
    - Label: 8

- Packing group
  - ADR, IMDG, IATA: II

- Environmental hazards:
  - Marine pollutant: No

- Special precautions for user
  - Danger code (Kemler): Warning: Corrosive substances.
  - EMS Number: F-A,S-B
  - Segregation groups: Alkalis

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  - Not applicable.

- Transport/Additional information:
  - ADR
  - Limited quantities (LQ): 1L
  - Transport category: 2
  - Tunnel restriction code: E
  - UN "Model Regulation": UN1760, CORROSIVE LIQUID, N.O.S. (ETHANOLAMINE), 8, II

15 Regulatory information

- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.
16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases
  
  H301  Toxic if swallowed.
  H302  Harmful if swallowed.
  H312  Harmful in contact with skin.
  H314  Causes severe skin burns and eye damage.
  H315  Causes skin irritation.
  H317  May cause an allergic skin reaction.
  H319  Causes serious eye irritation.
  H331  Toxic if inhaled.
  H332  Harmful if inhaled.
  H373  May cause damage to organs through prolonged or repeated exposure.
  R20/21/22  Harmful by inhalation, in contact with skin and if swallowed.
  R21  Harmful in contact with skin.
  R23/25  Toxic by inhalation and if swallowed.
  R34  Causes burns.
  R36/38  Irritating to eyes and skin.
  R43  May cause sensitisation by skin contact.
  R48/22  Harmful: danger of serious damage to health by prolonged exposure if swallowed.

- Department issuing MSDS:
  Autosol, LLC
  P.O. Box 343058
  Austin, TX 78734

- Contact: msds@autosol.com

- 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 (division of the American Chemical Society)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent