1 Identification

- **Product identifier**
  - **Trade name:** GC6A
  - **Application of the substance / the mixture**: Adhesives

- **Details of the supplier of the safety data sheet**
  - **Supplier:**
    - Alfa Laval Lund AB
    - Box 74
    - SE-221 00 Lund
    - Sweden
    - +46 46 36 65 00
    - info.se@alfalaval.com

- **Information department:**
  For additional questions regarding safety data sheets please contact your local Alfa Laval Sales Company which you find on www.alfalaval.com or in safety data sheet under section 16: Other Information

- **Emergency telephone number:** US and Canada: 911

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - Flam. Liq. 2  H225  Highly flammable liquid and vapor.
  - Skin Irrit. 2  H315  Causes skin irritation.
  - Eye Irrit. 2A H319  Causes serious eye irritation.
  - Skin Sens. 1  H317  May cause an allergic skin reaction.
  - Muta. 2  H341  Suspected of causing genetic defects.
  - Carc. 1A  H350  May cause cancer.
  - Repr. 2  H361  Suspected of damaging fertility or the unborn child.
  - STOT RE 1  H372  Causes damage to organs through prolonged or repeated exposure.

- **Label elements**
  - **GHS label elements**
    The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**
  - GHS02
  - GHS07
  - GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  - ethanol
  - Phenol formaldehyde
  - toluene
  - phenol

- **Hazard statements**
  - H225 Highly flammable liquid and vapor.
  - H315 Causes skin irritation.
  - H319 Causes serious eye irritation.

(Contd. on page 2)
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.

**Precautionary statements**
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
- P280 Wear protective gloves.
- P273 Avoid release to the environment.
- P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO2, sand, extinguishing powder.

**Other hazards**

**Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

**Chemical characterization: Mixtures**

**Description:**
- Polyvinylbutyral

**Dangerous components:**

<table>
<thead>
<tr>
<th>CAS</th>
<th>Chemical Name</th>
<th>PBT</th>
<th>vPvB</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>ethanol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9003-35-4</td>
<td>Phenol formaldehyde</td>
<td></td>
<td></td>
</tr>
<tr>
<td>108-88-3</td>
<td>toluene</td>
<td></td>
<td></td>
</tr>
<tr>
<td>108-95-2</td>
<td>phenol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>67-56-1</td>
<td>methanol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>78-93-3</td>
<td>butanone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>67-63-0</td>
<td>propan-2-ol</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Contd. on page 3)
4 First-aid measures

- Description of first aid measures
- General information:
  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; consult doctor in case of complaints.
- After skin contact:
  Immediately wash with water and soap and rinse thoroughly.
  Take off immediately all contaminated clothing.
  If symptoms persist consult doctor.
- After eye contact:
  Flush eyes with lukewarm water for 10-15 minutes. Transport the exposed person to hospital or an eye specialist. Continue rinsing eyes during transport.
  Remove contact lenses, if present and easy to do. Continue rinsing.
- After swallowing:
  If swallowed: Rinse mouth. Do NOT induce vomiting.
  If symptoms persist consult doctor.
- Information for doctor:
  Most important symptoms and effects, both acute and delayed Refer to section 11.1
  Danger
  Contains chemical(s) which can cause damages to the unborn child or other reproduction damages.
  Indication of any immediate medical attention and special treatment needed
  This product contain methanol. Methanol poisoning can cause metabolic acidose, blindness or death. The symptoms can be delayed for 18 to 24 hours.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents:
  Carbon dioxide
  Fire-extinguishing powder
- Special hazards arising from the substance or mixture
  No further relevant information available.
- Advice for firefighters
- Protective equipment:
  Wear fully protective suit.
  Wear self-contained respiratory protective device.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Ensure adequate ventilation
  Keep away from ignition sources
  Use respiratory protective device against the effects of fumes/dust/aerosol.
  Absorb liquid components with liquid-binding material.
  Use only non-sparking tools.
  Wear protective equipment. Keep unprotected persons away.
  Do not breathe vapour.
Trade name: GC6A

- **Environmental precautions:**
  - Keep contaminated washing water and dispose of appropriately.
  - Do not flush with water or aqueous cleansing agents.
  - Do not allow to enter sewers/surface or ground water.
  - Send for recovery or disposal in suitable receptacles.

- **Methods and material for containment and cleaning up:**
  - Send for recovery or disposal in suitable receptacles.
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.
  - Do not flush with water or aqueous cleansing agents.

- **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:**
  - **Precautions for safe handling:**
    - Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
    - Avoid contact with skin.
    - Handle and open container with care.
    - Do not breathe vapour.
    - Ensure good ventilation/exhaustion at the workplace.
    - Prevent formation of aerosols.
    - When using do not eat, drink or smoke.
    - See Section 8 for information on personal protection equipment.
    - Use only non-sparking tools.
  
  - **Information about protection against explosions and fires:**
    - Wear shoes with conductive soles.
    - Use explosion-proof apparatus / fittings and spark-proof tools.
    - Keep ignition sources away - Do not smoke.
    - Protect against electrostatic charges.
    - Highly flammable.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**
  - **Requirements to be met by storerooms and receptacles:**
    - Store in a well-ventilated place. Keep cool.
    - Protect from sunlight.
  
  - **Information about storage in one common storage facility:**
    - Store away from oxidizing agents.
    - Do not store together with acids.
  
  - **Further information about storage conditions:**
    - Keep receptacle tightly sealed.
    - Store in cool, dry conditions in well sealed receptacles.
  
  - **Specific end use(s) Adhesives**
### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Control parameters**

<table>
<thead>
<tr>
<th>CAS: 64-17-5 ethanol</th>
<th>PEL</th>
<th>Long-term value: 1900 mg/m³, 1000 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>REL</td>
<td>Long-term value: 1900 mg/m³, 1000 ppm</td>
</tr>
<tr>
<td></td>
<td>TLV</td>
<td>Short-term value: 1880 mg/m³, 1000 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 108-88-3 toluene</th>
<th>PEL</th>
<th>Long-term value: 200 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ceiling limit value: 300; 500* ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*10-min peak per 8-hr shift</td>
<td></td>
</tr>
<tr>
<td></td>
<td>REL</td>
<td>Short-term value: 560 mg/m³, 150 ppm</td>
</tr>
<tr>
<td></td>
<td>Long-term value: 375 mg/m³, 100 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TLV</td>
<td>Long-term value: 75 mg/m³, 20 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 108-95-2 phenol</th>
<th>PEL</th>
<th>Long-term value: 19 mg/m³, 5 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>REL</td>
<td>Long-term value: 19 mg/m³, 5 ppm</td>
</tr>
<tr>
<td></td>
<td>Skin</td>
<td>Ceiling limit value: 60* mg/m³, 15.6* ppm</td>
</tr>
<tr>
<td></td>
<td>*15-min; Skin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TLV</td>
<td>Long-term value: 19 mg/m³, 5 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 67-56-1 methanol</th>
<th>PEL</th>
<th>Long-term value: 260 mg/m³, 200 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>REL</td>
<td>Short-term value: 325 mg/m³, 250 ppm</td>
</tr>
<tr>
<td></td>
<td>Long-term value: 260 mg/m³, 200 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TLV</td>
<td>Short-term value: 328 mg/m³, 250 ppm</td>
</tr>
<tr>
<td></td>
<td>Long-term value: 262 mg/m³, 200 ppm</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 78-93-3 butanone</th>
<th>PEL</th>
<th>Long-term value: 590 mg/m³, 200 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>REL</td>
<td>Short-term value: 885 mg/m³, 300 ppm</td>
</tr>
<tr>
<td></td>
<td>Long-term value: 590 mg/m³, 200 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TLV</td>
<td>Short-term value: 885 mg/m³, 300 ppm</td>
</tr>
<tr>
<td></td>
<td>BEI</td>
<td>Long-term value: 590 mg/m³, 200 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 67-63-0 propan-2-ol</th>
<th>PEL</th>
<th>Long-term value: 980 mg/m³, 400 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Contd. on page 6)</td>
<td></td>
</tr>
</tbody>
</table>
**Ingredients with biological limit values:**

<table>
<thead>
<tr>
<th>CAS</th>
<th>BEI</th>
<th>Medium</th>
<th>Time</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-88-3 toluene</td>
<td>0.02 mg/L</td>
<td>blood</td>
<td>prior to last shift</td>
<td>Toluene</td>
</tr>
<tr>
<td></td>
<td>0.03 mg/L</td>
<td>urine</td>
<td>end of shift</td>
<td>Toluene</td>
</tr>
<tr>
<td></td>
<td>0.3 mg/g creatinine</td>
<td>urine</td>
<td>end of shift</td>
<td>o-Cresol with hydrolysis (background)</td>
</tr>
<tr>
<td>108-95-2 phenol</td>
<td>250 mg/g creatinine</td>
<td>urine</td>
<td>end of shift</td>
<td>Phenol with hydrolysis (background, nonspecific)</td>
</tr>
<tr>
<td>67-56-1 methanol</td>
<td>15 mg/L</td>
<td>urine</td>
<td>end of shift</td>
<td>Methanol (background, nonspecific)</td>
</tr>
<tr>
<td>78-93-3 butanone</td>
<td>2 mg/L</td>
<td>urine</td>
<td>end of shift</td>
<td>MEK</td>
</tr>
<tr>
<td>67-63-0 propan-2-ol</td>
<td>40 mg/L</td>
<td>urine</td>
<td>end of shift at end of workweek</td>
<td>Acetone (background, nonspecific)</td>
</tr>
</tbody>
</table>

**Additional information:** The lists that were valid during the creation were used as basis.

**Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - Do not eat, drink, smoke or sniff while working.
  - Ensure that washing facilities are available at the work place.
  - Ground/bond container and receiving equipment.
  - Keep away from foodstuffs, beverages and feed.
Trade name: GC6A

Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Use only in well-ventilated areas. In case of insufficient ventilation, wear suitable respiratory equipment.

- **Breathing equipment:**
  - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**
  - Check protective gloves prior to each use for their proper condition.

**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**
  - Butyl rubber, BR
  - Fluorocarbon rubber (Viton)

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.

- **Eye protection:**
  - Tightly sealed goggles

- **Body protection:**
  - Use protective suit.

- **Limitation and supervision of exposure into the environment**
  - Keep contaminated washing water and dispose of appropriately.
  - Do not flush with water or aqueous cleansing agents
  - Do not allow to enter sewers/ surface or ground water.
  - Send for recovery or disposal in suitable receptacles.

---

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
  - Form: Fluid
  - Color: Yellow-brown
# Safety Data Sheet acc. to OSHA HCS

**Trade name:** GC6A

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Odor:</strong></td>
<td>Phenol-like</td>
</tr>
<tr>
<td><strong>Odor threshold:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>pH-value:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range:</td>
<td>Undetermined.</td>
</tr>
<tr>
<td>Boiling point/Boiling range:</td>
<td>55 °C (131 °F)</td>
</tr>
<tr>
<td><strong>Flash point:</strong></td>
<td>4 °C (39 °F)</td>
</tr>
<tr>
<td><strong>Flammability (solid, gaseous):</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Ignition temperature:</strong></td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Auto igniting:</td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Danger of explosion:</strong></td>
<td>Product is not explosive. However, formation of explosive air/vapor mixtures are possible.</td>
</tr>
<tr>
<td><strong>Explosion limits:</strong></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>1.2 Vol %</td>
</tr>
<tr>
<td>Upper</td>
<td>15.0 Vol %</td>
</tr>
<tr>
<td><strong>Vapor pressure at 20 °C (68 °F):</strong></td>
<td>59 hPa (44 mm Hg)</td>
</tr>
<tr>
<td><strong>Density:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Relative density at 20 °C (68 °F):</strong></td>
<td>0.9-0.95 g/cm³ (7.511-7.928 lbs/gal)</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with Water:</strong></td>
<td>Insoluble.</td>
</tr>
<tr>
<td><strong>Partition coefficient (n-octanol/water):</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Viscosity:</strong></td>
<td></td>
</tr>
<tr>
<td>Dynamic</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Kinematic</td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Solvent content:</strong></td>
<td></td>
</tr>
<tr>
<td>Organic solvents:</td>
<td>81.5 %</td>
</tr>
<tr>
<td><strong>VOC content:</strong></td>
<td>81.5 %</td>
</tr>
<tr>
<td><strong>Other information</strong></td>
<td></td>
</tr>
<tr>
<td>Volatile organic compounds:</td>
<td>495 - 617 g/l</td>
</tr>
<tr>
<td>Volative compounds:</td>
<td>55 - 65 %</td>
</tr>
</tbody>
</table>

## 10 Stability and reactivity

- **Reactivity**
  This product can be reactive with certain compounds under some circumstancances - please see headings in this section.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
  No decomposition if used and stored according to specifications.
Possibility of hazardous reactions: No dangerous reactions known.

Conditions to avoid:
- Keep ignition sources away - Do not smoke.
- Take precautionary measures against static discharge.
- Do not store together with acids.
- Store away from oxidizing agents.

Incompatible materials: No further relevant information available.

Hazardous decomposition products:
- Formation of toxic gases is possible during heating or in case of fire.
  - Aldehyde
  - Irritant gases/vapors
  - Hydrocarbons
  - Carbon monoxide and carbon dioxide

11 Toxicological information

Information on toxicological effects

Acute toxicity:

<table>
<thead>
<tr>
<th>CAS: 64-17-5 ethanol</th>
<th>Oral LD50</th>
<th>7060 mg/kg (rat)</th>
<th>Inhalative LC50/4 h</th>
<th>20000 mg/l (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 108-88-3 toluene</td>
<td>Oral LD50</td>
<td>5000 mg/kg (rat)</td>
<td>Dermal LD50</td>
<td>12124 mg/kg (rabbit)</td>
</tr>
<tr>
<td></td>
<td>Inhalative LC50/4 h</td>
<td>5320 mg/l (mouse)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS: 108-95-2 phenol</td>
<td>Oral LD50</td>
<td>317 mg/kg (rat)</td>
<td>Dermal LD50</td>
<td>850 mg/kg (rabbit)</td>
</tr>
<tr>
<td></td>
<td>Dermal LDLo</td>
<td>630 mg/kg (rabbit) (LD50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS: 67-56-1 methanol</td>
<td>Oral LD50</td>
<td>5628 mg/kg (rat)</td>
<td>Dermal LD50</td>
<td>15800 mg/kg (rabbit)</td>
</tr>
<tr>
<td>CAS: 78-93-3 butanone</td>
<td>Oral LD50</td>
<td>3300 mg/kg (rat)</td>
<td>Dermal LDLo</td>
<td>6480 mg/kg (rabbit) (LD50)</td>
</tr>
</tbody>
</table>

Primary irritant effect:
- on the skin: Irritant to skin and mucous membranes.
- on the eye: Irritating effect.
  - May cause irreversible eye damage

(Contd. on page 10)
**Trade name:** GC6A

**Sensitization:**
The product contains one or more allergens. Sensitization possible through skin contact.

**Additional toxicological information:**
Inhalation of concentrated vapors as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc. The product shows the following dangers according to internally approved calculation methods for preparations:
- Harmful
- Irritant

Harmful: danger of serious damage to health by prolonged exposure through inhalation.

**Carcinogenic categories**

<table>
<thead>
<tr>
<th>CAS</th>
<th>Substance</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>ethanol</td>
<td>1</td>
</tr>
<tr>
<td>108-88-3</td>
<td>toluene</td>
<td>3</td>
</tr>
<tr>
<td>108-95-2</td>
<td>phenol</td>
<td>3</td>
</tr>
<tr>
<td>67-63-0</td>
<td>propan-2-ol</td>
<td>3</td>
</tr>
<tr>
<td>50-00-0</td>
<td>formaldehyde</td>
<td>1</td>
</tr>
<tr>
<td>123-31-9</td>
<td>1,4-dihydroxybenzene</td>
<td>3</td>
</tr>
</tbody>
</table>

**NTP (National Toxicology Program)**

<table>
<thead>
<tr>
<th>CAS</th>
<th>Substance</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-00-0</td>
<td>formaldehyde</td>
<td>K</td>
</tr>
</tbody>
</table>

**OSHA-Ca (Occupational Safety & Health Administration)**

<table>
<thead>
<tr>
<th>CAS</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-00-0</td>
<td>formaldehyde</td>
</tr>
</tbody>
</table>

**12 Ecological information**

**Toxicity**
No test data available for the product.

<table>
<thead>
<tr>
<th>CAS</th>
<th>Substance</th>
<th>LC50 (mg/L) (Fish) (96 h.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>108-95-2</td>
<td>phenol</td>
<td>0.00175 - 67.5</td>
</tr>
</tbody>
</table>

**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability:** No further relevant information available.

**Behavior in environmental systems:**
- **Bioaccumulative potential** Contact your supplier for more information.
- **Mobility in soil** Contact your supplier for more information.

**Additional ecological information:**
- **General notes:**
  Do not allow product to reach ground water, water course or sewage system.
  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 of together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packagings:
  - Recommendation:
    Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

14 Transport information

- UN-Number
  - DOT, ADR, IMDG, IATA
    UN1133
- UN proper shipping name
  - DOT, IATA
    Adhesives
  - ADR
    1133 Adhesives, ENVIRONMENTALLY HAZARDOUS
  - IMDG
    ADHESIVES, containing flammable liquid
- Transport hazard class(es)
  - ADR
    - Class 3 Flammable liquids
    - Label 3
  - IMDG, IATA
    - Class 3 Flammable liquids
    - Label 3
- Packing group
  - DOT, ADR, IMDG, IATA
    II
- Environmental hazards:
  - Marine pollutant: No
  - Special marking (ADR): Symbol (fish and tree)
- Special precautions for user
  - EMS Number: Warning: Flammable liquids F-E,S-D
  - Stowage Category B
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  Not applicable.
Safety Data Sheet
acc. to OSHA HCS

Printing date 06/13/2016  Reviewed on 06/13/2016

Trade name: GC6A

<table>
<thead>
<tr>
<th>Transport/Additional information:</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
</tr>
<tr>
<td>Quantity limitations</td>
</tr>
<tr>
<td>On passenger aircraft/rail: 5 L</td>
</tr>
<tr>
<td>On cargo aircraft only: 60 L</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ADR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excepted quantities (EQ)</td>
</tr>
<tr>
<td>Code: E2</td>
</tr>
<tr>
<td>Maximum net quantity per inner packaging: 30 ml</td>
</tr>
<tr>
<td>Maximum net quantity per outer packaging: 500 ml</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited quantities (LQ)</td>
</tr>
<tr>
<td>5 L</td>
</tr>
<tr>
<td>Excepted quantities (EQ)</td>
</tr>
<tr>
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<tr>
<td>Maximum net quantity per outer packaging: 500 ml</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UN &quot;Model Regulation&quot;:</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN 1133 ADHESIVES, 3, II, ENVIRONMENTALLY HAZARDOUS</td>
</tr>
</tbody>
</table>

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - EU regulation (EC) no 1272/2008 (CLP)
  - EC DIRECTIVE 2008/98/EC (waste)
  - EU Regulation (EC) no.1907/2006 (REACH)
  - Sara
    - Section 355 (extremely hazardous substances):
      - CAS: 108-95-2 phenol
      - CAS: 50-00-0 formaldehyde
      - CAS: 123-31-9 1,4-dihydroxybenzene
    - Section 313 (Specific toxic chemical listings):
      - CAS: 108-88-3 toluene
      - CAS: 108-95-2 phenol
      - CAS: 67-56-1 methanol
      - CAS: 78-93-3 butanone
      - CAS: 67-63-0 propan-2-ol
      - CAS: 50-00-0 formaldehyde
      - CAS: 123-31-9 1,4-dihydroxybenzene
    - TSCA (Toxic Substances Control Act):
      - CAS: 64-17-5 ethanol
      - CAS: 9003-35-4 Phenol formaldehyde
      - CAS: 108-88-3 toluene
      - CAS: 108-95-2 phenol
      - CAS: 67-56-1 methanol
      - CAS: 78-93-3 butanone
Trade name: GC6A

<table>
<thead>
<tr>
<th>CAS</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-63-0</td>
<td>propan-2-ol</td>
</tr>
<tr>
<td>50-00-0</td>
<td>formaldehyde</td>
</tr>
<tr>
<td>123-31-9</td>
<td>1,4-dihydroxybenzene</td>
</tr>
</tbody>
</table>

- **Proposition 65**
  - Chemicals known to cause cancer:
    - CAS: 50-00-0 formaldehyde

- **Chemicals known to cause reproductive toxicity for females**:
  - CAS: 108-88-3 toluene

- **Chemicals known to cause reproductive toxicity for males**:
  - None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity**:
  - CAS: 64-17-5 ethanol
  - CAS: 108-88-3 toluene
  - CAS: 67-56-1 methanol

- **Carcinogenic categories**
  - **EPA (Environmental Protection Agency)**
    - CAS: 108-88-3 toluene II
    - CAS: 108-95-2 phenol D, I
    - CAS: 78-93-3 butanone I
    - CAS: 50-00-0 formaldehyde B1
  - **TLV (Threshold Limit Value established by ACGIH)**
    - CAS: 64-17-5 ethanol A3
    - CAS: 108-88-3 toluene A4
    - CAS: 108-95-2 phenol A4
    - CAS: 67-63-0 propan-2-ol A4
    - CAS: 50-00-0 formaldehyde A2
    - CAS: 123-31-9 1,4-dihydroxybenzene A3
  - **NIOSH-Ca (National Institute for Occupational Safety and Health)**
    - CAS: 50-00-0 formaldehyde

- **GHS Label elements**
  - The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Signal word** Danger

- **Hazard-determining components of labeling**:
  - ethanol
  - Phenol formaldehyde
  - toluene
  - phenol
### Trade name: GC6A

#### Hazard statements
- H225 Highly flammable liquid and vapor.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H317 May cause an allergic skin reaction.
- H341 Suspected of causing genetic defects.
- H350 May cause cancer.
- H361 Suspected of damaging fertility or the unborn child.
- H372 Causes damage to organs through prolonged or repeated exposure.

#### Precautionary statements
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
- P280 Wear protective gloves.
- P273 Avoid release to the environment.
- P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P370+P378 In case of fire: Use for extinction: CO2, sand, extinguishing powder.

#### 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.

**LIMITATION OF LIABILITY**

This document is only intended to be used as guidance as regards the risks of which we are aware that are associated with the product. Every individual who works with the product or in close proximity of it must receive suitable training. Individuals who come into contact with the product must be capable of using their own judgement as regards conditions or methods for handling, storing and using the product. Alfa Laval is not liable for demands, losses or damage of any kind that arise from flaws or deficiencies in this document or from using, handling, storing or disposing of the product unless it can be proven that Alfa Laval has acted in a grossly negligent manner. Beyond what has been agreed upon and specified in writing with Alfa Laval in the individual case, Alfa Laval makes no promises or assumes any liability, including but not limited to implicit guarantees regarding marketability or appropriateness in terms of both the information provided in this document and the product to which the information refers.

Please contact your local Alfa Laval Sales Company for further questions:

www.alfalaval.com

**Department issuing SDS:** MACC - Materials & Chemistry Centre

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Date of preparation / last revision 06/13/2016 / -

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
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
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)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Acute Tox. 3: Acute toxicity, Hazard Category 3
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Muta. 2: Germ cell mutagenicity, Hazard Category 2
Carc. 1A: Carcinogenicity, Hazard Category 1A
Repr. 2: Reproductive toxicity, Hazard Category 2
STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
Asp. Tox. 1: Aspiration hazard, Hazard Category 1

* Data compared to the previous version altered.