1 Identification of substance

- Product details
  - Trade name: Ni-NTA Agarose, Ni-NTA Superflow

- Manufacturer/Supplier:
  QIAGEN GmbH, QIAGEN Str. 1, 40724 Hilden, Germany
  Tel.: (+49)-2103/29-0

- Information department:
  QIAGEN Technical Service
  QIAGEN Inc., 27220 Turnberry Lane, Valencia, CA 91355, USA
  Tel.: 1-800-DNA-PREP (1-800-362-7737)
  Email: techservice-us@qiagen.com

- Emergency information:
  CHEMTREC
  USA & Canada 1-800-424-9300
  Outside USA & Canada +1 703-527-3887

2 Composition/Data on components

- Chemical characterization
  - Description: Mixture of substances listed below with nonhazardous additions.

- Dangerous components:
  990-00-1 Ni-NTA Resin 25-50%
  64-17-5 ethanol 25-50%

3 Hazards identification

- Hazard description:
  Harmful

- Information pertaining to particular dangers for man and environment:
  Flammable.
  Harmful if swallowed.
  Limited evidence of a carcinogenic effect.
  May cause sensitization by inhalation and skin contact.
  Warning - contains substance not yet fully tested

- Classification system:
  The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- NFPA ratings (scale 0 - 4)
  Health = 2
  Fire = 3
  Reactivity = 0

- WHMIS-ratings (scale 0 - 4)
  Health = *2
  Fire = 3
  Reactivity = 0

4 First aid measures

- After inhalation: Supply fresh air; consult doctor in case of complaints.
- 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.

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- **After swallowing:** Immediately call a doctor.

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### 5 Fire fighting measures

- **Suitable extinguishing agents:**
  CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **Protective equipment:** Do not inhale explosion gases or combustion gases.

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### 6 Accidental release measures

- **Person-related safety precautions:** Ensure adequate ventilation
- **Measures for environmental protection:** Do not allow to enter sewers/surface or ground water.
- **Measures for cleaning/collection:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13.

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### 7 Handling and storage

- **Handling:**
  - **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.
  - **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.

- **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 receptacle tightly sealed.

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### 8 Exposure controls and personal protection

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

- **Components with limit values that require monitoring at the workplace:**

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Designation of material</th>
<th>%</th>
<th>Type</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>ethanol</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH TLV</td>
<td>1880 mg/m³, 1000 ppm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIOSH REL</td>
<td>1900 mg/m³, 1000 ppm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA PEL</td>
<td>1900 mg/m³, 1000 ppm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Personal protective equipment:**
  - **General protective and hygienic measures:**
    Keep away from foodstuffs, beverages and feed.
    Immediately remove all soiled and contaminated clothing.
    Wash hands before breaks and at the end of work.

- **Protection of hands:** Protective gloves

- **Material of 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.

- **Penetration time of glove material**
  The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

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9 Physical and chemical properties

· General Information
  Form: Suspension
  Color: According to product specification
  Odor: Characteristic

· Change in condition
  Melting point/Melting range: Undetermined.
  Boiling point/Boiling range: Undetermined.

· Flash point: 21 - 55°C (70 - 131°F)
· Ignition temperature: 425°C (797°F)
· Auto igniting: Product is not selfigniting.
· Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:
  Lower: 3.5 Vol %
  Upper: 15.0 Vol %
· Vapor pressure at 20°C (68°F): 59 hPa (44 mm Hg)
· Density: Not determined.
· Solubility in / Miscibility with
  Water: Fully miscible.
· pH-value at 20°C (68°F): 6.5

10 Stability and reactivity

· Thermal decomposition / conditions to be avoided:
  No decomposition if used according to specifications.
· Dangerous reactions Reacts with acids, alkalis and oxidizing agents.
· Dangerous products of decomposition: Danger of toxic pyrolysis products.

11 Toxicological information

· Acute toxicity:
· Primary irritant effect:
  · on the skin: Irritant to skin and mucous membranes.
  · on the eye: Irritating effect.
· Sensitization:
  Sensitization possible through inhalation.
  Sensitization possible through skin contact.
· Additional toxicological information:
  The product shows the following dangers according to internally approved calculation methods for preparations:
  Harmful
Material Safety Data Sheet  
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<table>
<thead>
<tr>
<th>Trade name: Ni-NTA Agarose, Ni-NTA Superflow</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Irritant</th>
</tr>
</thead>
</table>

(Contd. of page 3)

12 Ecological information

- General notes:
  Water hazard class 1 (Self-assessment): slightly hazardous for water  
  Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

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

- Uncleaned packagings:
  - Recommendation:
    Disposal must be made according to official regulations.

  - Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- DOT regulations:
  - Hazard class: 3
  - Identification number: UN1170
  - Packing group: III
  - Proper shipping name (technical name): ETHANOL SOLUTION
  - Label: 3

- Land transport ADR/RID (cross-border):
  - ADR/RID class: 3 Flammable liquids
  - Danger code (Kemler): 30
  - UN-Number: 1170
  - Packaging group: III
  - Description of goods: 1170 Ethanol solution (Ethyl alcohol solution)

- Maritime transport IMDG:
  - IMDG Class: 3
  - UN Number: 1170
  - Label: 3
  - Packaging group: III
  - Marine pollutant: No
  - Proper shipping name: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

- Air transport ICAO-TI and IATA-DGR:
  - ICAO/IATA Class: 3
  - UN/ID Number: 1170
  - Label: 3
  - Packaging group: III
  - Proper shipping name: ETHANOL SOLUTION

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15 Regulations

- Sara
  - Section 313 (Specific toxic chemical listings):
    None of the ingredients is listed.
- TSCA (Toxic Substances Control Act):
  - Proposition 65
  - Chemicals known to cause cancer:
    None of the ingredients is listed.
  - Chemicals known to cause reproductive toxicity for females:
    None of the ingredients is listed.
  - Chemicals known to cause reproductive toxicity for males:
    None of the ingredients is listed.
  - Chemicals known to cause developmental toxicity:
    64-17-5 ethanol
- Cancerogenity categories
  - EPA (Environmental Protection Agency)
    None of the ingredients is listed.
  - IARC (International Agency for Research on Cancer)
    None of the ingredients is listed.
  - NTP (National Toxicology Program)
    None of the ingredients is listed.
- TLV (Threshold Limit Value established by ACGIH)
  - 64-17-5 ethanol: A4 (25-50%)
- MAK (German Maximum Workplace Concentration)
  - 64-17-5 ethanol: 5
- NIOSH-Ca (National Institute for Occupational Safety and Health)
  - None of the ingredients is listed.
- OSHA-Ca (Occupational Safety & Health Administration)
  - None of the ingredients is listed.
- Product related hazard informations:
  The product has been classified and marked in accordance with directives on hazardous materials.
- Hazard symbols:
  Harmful
- Risk phrases:
  Flammable.
  Harmful if swallowed.
  Limited evidence of a carcinogenic effect.
  May cause sensitization by inhalation and skin contact.
- Safety phrases:
  Keep away from food, drink and animal feedingstuffs.
  In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  Wear suitable protective clothing.
  If swallowed, seek medical advice immediately and show this container or label.
- Special labeling of certain preparations:
  Warning - contains substance not yet fully tested
Trade name: Ni-NTA Agarose, Ni-NTA Superflow

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.