1 Identification of substance

- **Product details**

  - **Trade name:** ZENOSTAR Color Zr Einfärbelösung white

- **Application of the substance / the preparation** Auxiliary for manufacture of dental prosthesis

- **Manufacturer/Supplier:**
  Wieland Dental + Technik GmbH & Co.KG
  Schwenninger Str. 13
  75179 Pforzheim
  Telefon + 49 (07231)-37050, Telefax + 49 (07231)-357959

- **Information department:** Abteilung Umweltschutz

- **Emergency information:**
  +49 (07231)-37050
  (Be kindly advised that this number can only be contacted at usual office hours.)

2 Composition/Data on components

- **Chemical characterization**

  - **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>13473-90-0 aluminium nitrate</td>
<td>1-5%</td>
</tr>
</tbody>
</table>

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

3 Hazards identification

- **Hazard description:** Not applicable.

- **Information pertaining to particular dangers for man and environment:**
  The product does not have 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 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 = 0
  - Fire = 0
  - Reactivity = 0

- **WHMIS-ratings (scale 0 - 4)**

  - Health = 0
  - Fire = 0
  - Reactivity = 0

- **GHS label elements** Void

4 First aid measures

- **General information:** No special measures required.

- **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. If symptoms persist, consult a doctor.

- **After swallowing:** Rinse out mouth and then drink plenty of water. Seek immediate medical advice.
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: No special measures required.

6 Accidental release measures

- Person-related safety precautions: Not required.
- Measures for environmental protection:
  No special measures required.
  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).
- Additional information: No dangerous substances are released.

7 Handling and storage

- Handling:
  Information for safe handling: No special measures required.
  Information about protection against explosions and fires: No special measures required.
- 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: None.

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>REL</th>
<th>2 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLV</td>
<td>1* mg/m³</td>
</tr>
<tr>
<td>as Al</td>
<td>as Al,*as respirable fraction</td>
</tr>
</tbody>
</table>

- Additional information: The lists that were valid during the creation were used as basis.
- Personal protective equipment:
- General protective and hygienic measures:
  The usual precautionary measures for handling chemicals should be followed.
- Breathing equipment: Not required.
- Protection of hands:
  Protective gloves

- Material of gloves
  Plastic 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.
Trade name: ZENOSTAR Color Zr Einfärbelösung white

- Not suitable are gloves made of the following materials:
  - Leather gloves
  - Strong gloves
- Eye protection: Goggles recommended during refilling.
- Body protection: Protective work clothing

9 Physical and chemical properties

- General Information
  - Form: Fluid
  - Color: Different according to coloring
  - Odor: Product specific

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

- Flash point: Not applicable.
- Ignition temperature: Not applicable
- Decomposition temperature: Not determined
- Auto igniting: Product is not selfigniting.
- Danger of explosion: Product does not present an explosion hazard.
- Explosion limits: Oxidizing properties None
- Density at 20°C (68°F): 1.01 g/cm³
- Solubility in / Miscibility with Water: Fully miscible.
- pH-value: Acidic
- Solvent content: Organic solvents: 0.0 %

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Dangerous reactions Reacts with alkali (lyes).
- Dangerous products of decomposition: Possible in traces.
  - Nitrogen oxides

11 Toxicological information

- Acute toxicity:
- Primary irritant effect:
  - on the skin: No irritant effect.
  - on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
The product is not subject to classification according to internally approved calculation methods for preparations:

(Contd. on page 4)
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 be specially treated adhering to official regulations.
    Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.

- Uncleaned packagings:
  - Recommendation: Packaging can be reused or recycled after cleaning.
  - Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- Maritime transport IMDG:
  - Marine pollutant: No

15 Regulations

- Sara
  - Section 355 (extremely hazardous substances):
    7697-37-2 nitric acid
  - Section 313 (Specific toxic chemical listings):
    7697-37-2 nitric acid
  - TSCA (Toxic Substances Control Act):
    All ingredients are listed.

- 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:
    None of the ingredients is listed.

- 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.
Material Safety Data Sheet
acc. to ISO/DIS 11014

Trade name: ZENOSTAR Color Zr Einfärbelösung white

- **NTP (National Toxicology Program)**
  None of the ingredients is listed.

- **TLV (Threshold Limit Value established by ACGIH)**
  None of the ingredients is listed.

- **MAK (German Maximum Workplace Concentration)**
  None of the ingredients is listed.

- **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 marked in accordance with national laws.
  Observe the general safety regulations when handling chemicals.
  The product is not subject to identification regulations according to directives on hazardous materials.

- **National regulations:**

- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

**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.

- **Department issuing MSDS:** Abteilung Umweltschutz
- **Contact:** Herr Marcus Müller
- **Abbreviations and acronyms:**
  - IMDG: International Maritime Code for Dangerous Goods
  - GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - NFPA: National Fire Protection Association (USA)
  - HMIS: Hazardous Materials Identification System (USA)