1 Identification

- Product identifier
  - Trade name: **Zenostar MT Color Impulse orange**
- Application of the substance / the mixture: Manufacture of dental prosthesis
- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier:
    Wieland Dental + Technik GmbH & Co. KG
    Lindenstraße 2
    75175 Pforzheim, Germany
    Telefon +49(0) 7231-37050, Telefax +49(0) 7231-357959
  - Information department: msds@wieland-dental.de
  - Emergency telephone number:
    24 Hour Emergency Assistance:
    Emergency-Call USA - Infotrac: 1-800-535-5053
    Emergency-Call Canada - Canutec: 1-613-996-6666
  - General SDS Assistance:
    US: 1-800-533-6825
    Canada: 1-800-263-8182

2 Hazard identification

- Classification of the substance or mixture
  - Skin Irrit. 2 H315 Causes skin irritation.
  - Eye Dam. 1 H318 Causes serious eye damage.
  - STOT SE 3 H335 May cause respiratory irritation.
- Label elements
  - GHS label elements
    The product is classified and labeled according to the Globally Harmonized System (GHS).
- Hazard pictograms
  - GHS05
  - GHS07
- Signal word: Danger
- Hazard-determining components of labeling:
  - Erbium(III)-nitrat pentahydrat
  - Iron(III) nitrate nonahydrate
- Hazard statements
  - Causes skin irritation.
  - Causes serious eye damage.
  - May cause respiratory irritation.
- Precautionary statements
  - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - Immediately call a POISON CENTER/doctor.
  - IF ON SKIN: Wash with plenty of water.
  - If skin irritation or rash occurs: Get medical advice/attention.

(Contd. on page 2)
Trade name: Zenostar MT Color Impulse orange

3 Composition/Information on ingredients

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

- Dangerous components:
  
<table>
<thead>
<tr>
<th>CAS</th>
<th>Description</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>10031-51-3</td>
<td>Erbium(III)-nitrat pentahydrat</td>
<td>25-30% w/w</td>
</tr>
<tr>
<td>7782-61-8</td>
<td>Iron(III) nitrate nonahydrate</td>
<td>3-7% w/w</td>
</tr>
</tbody>
</table>

4 First aid measures

- Description of first aid measures
- After inhalation:
  Supply fresh air or oxygen; call for doctor.
  In case of unconsciousness place patient stably in side position for transportation.
- After skin contact:
  Immediately rinse with water.
  If skin irritation continues, consult a doctor.
- After eye contact:
  Rinse opened eye for several minutes under running water.
  Call a doctor immediately.
- After swallowing:
  Rinse out mouth and then drink plenty of water.
  Seek medical treatment.
- 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 fighting measures that suit the environment.
- Special hazards arising from the substance or mixture No further relevant information available.

(Contd. on page 3)
Safety Data Sheet
according to HPR, Schedule 1

Printing date 09/24/2015 Reviewed on 09/21/2015
Version number 1

Trade name: Zenostar MT Color Impulse orange

- Advice for firefighters
- Protective equipment: Wear self-contained respiratory protective device.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
  Use respiratory protective device against the effects of fumes/dust/aerosol.
- Environmental precautions: 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).
  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:
- Precautions for safe handling
  Only adequately trained personnel should handle this product.
  For use in dentistry only.
  Ensure good ventilation/exhaustion at the workplace.
  Prevent formation of aerosols.
- Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities
- Storage:
  Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
  Information about storage in one common storage facility: Not required.
- Further information about storage conditions:
  Keep receptacle tightly sealed.
  Protect from heat and direct sunlight.
- Specific end use(s) No further relevant information available.

8 Exposure controls/ Personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters
  Components with limit values that require monitoring at the workplace:
  The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment:
  General protective and hygienic measures:
  Usual hygienic measures for dental practice.
  Keep away from foodstuffs, beverages and feed.
  Wash hands before breaks and at the end of work.
  Immediately remove all soiled and contaminated clothing.
  Avoid contact with the eyes and skin.
41.2.6 Do not inhale gases / fumes / aerosols.

- Breathing equipment: Use suitable respiratory protective device in case of insufficient ventilation.

- Protection of hands:

  Protective gloves

  The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. After use of gloves apply skin-cleaning agents and skin cosmetics.

- Material of gloves
  Natural rubber, NR
  Chloroprene rubber, CR
  Nitrile rubber, NBR
  Butyl rubber, BR
  Fluorocarbon rubber (Viton)

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

- 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

9 Physical and chemical properties

- Information on basic physical and chemical properties

  - General Information
    - Appearance:
      Form: Fluid
      Color: Orange
      Odor: Characteristic
      Odor threshold: Not determined.
    - pH-value: Not determined.
  - Change in condition
    Melting point/Melting range: Undetermined.
    Boiling point/Boiling range: Undetermined.
  - Flash point: Undetermined.
  - Flammability (solid, gaseous): Not applicable.
  - Auto igniting: Product is not selfigniting.
  - Danger of explosion: Product does not present an explosion hazard.
  - Explosion limits:
    Lower: Not determined.
    Upper: Not determined.
  - Vapor pressure: Not determined.
  - Density: Not determined.
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- **Relative density**: Not determined.
- **Vapor density**: Not determined.
- **Evaporation rate**: Not determined.
- **Solubility in / Miscibility with Water**: Soluble.
- **Partition coefficient (n-octanol/water)**: Not determined.
- **Viscosity**: Dynamic: Not determined.
  Kinematic: Not determined.
- **Other information**: No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**: No further relevant information available.
- **Chemical stability**: Stable under normal handling and storage conditions.
- **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**: None under normal conditions of storage and use.

### 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity**: Based on available data, the classification criteria are not met.
  - **LD/LC50 values that are relevant for classification**: Based on available data, the classification criteria are not met.
  - **on the skin**: Irritant to skin and mucous membranes.
  - **on the eye**: Strong irritant with the danger of severe eye injury.
  - **Additional toxicological information**
  - **Carcinogenic categories**
  - **NTP (National Toxicology Program)**: None of the ingredients is listed.
  - **OSHA-Ca (Occupational Safety & Health Administration)**: None of the ingredients is listed.

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity**: No further relevant information available.
- **Persistence and degradability**: No further relevant information available.
- **Behavior 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 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.
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- 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:
    Take to an approved landfill or a waste incineration plant, under conditions approved by the local authority.
- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

### 14 Transport information

- UN-Number
  - DOT, TDG, ADN, IMDG, IATA Void
- UN proper shipping name
  - DOT, TDG, ADN, IMDG, IATA Void
- Transport hazard class(es)
  - DOT, TDG, ADN, IMDG, IATA Void
  - Class Void
- Packing group
  - DOT, TDG, IMDG, IATA Void
- Environmental hazards:
  Not applicable.
- Special precautions for user
  Not applicable.
- Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
  Not applicable.
- Transport/Additional information:
  Product is not classified as a dangerous good for transport (ADR, IMDG, IATA).
- UN "Model Regulation": Void

### 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Sara
    - Section 355 (extremely hazardous substances):
      None of the ingredients is listed.
    - Section 313 (Specific toxic chemical listings):
      All ingredients are listed.
  - TSCA (Toxic Substances Control Act):
    None of the ingredients is listed.
Trade name: Zenostar MT Color Impulse orange

**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.

**Carcinogenic categories**

- **EPA (Environmental Protection Agency)**
  None of the ingredients is listed.

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

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  None of the ingredients is listed.

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

**Hazard pictograms**

- GHS05
- GHS07

**Signal word** Danger

**Hazard-determining components of labeling:**
Erbium(III)-nitrat pentahydrat
Iron(III) nitrate nonahydrate

**Hazard statements**
Causes skin irritation.
Causes serious eye damage.
May cause respiratory irritation.

**Precautionary statements**

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

**IF ON SKIN:** Wash with plenty of water.
If skin irritation or rash occurs: Get medical advice/attention.

**National regulations:**

- **Other regulations, limitations and prohibitive regulations**
The product is a medical device according to the Directive 93/42/EEC.
This product is classified as a medical device under US and Canadian regulations and has been reviewed by the US Food and Drug Administration and Health Canada.

- **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.

- Date of preparation / last revision 09/24/2015 / -

- Abbreviations and acronyms:
  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)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
  Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
  STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3