1 Identification

- Product identifier
  - Trade name: Universal Adhesive - Silikon

- Relevant identified uses of the substance or mixture and uses advised against
  No further relevant information available.

- Application of the substance / the mixture
  Tray adhesive for use with silicone impression materials

- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier:
    Heraeus Kulzer GmbH
    Grüner Weg 11, D-63450 Hanau
    Tel.: 0800 4372522
  - Information department:
    Marc Henn
    Tel. +1 (574) 2995444 / Fax: +1 (574) 2912542
    e-mail: marc.henn@kulzer-dental.com
  - Emergency telephone number:
    Emergency CONTACT (24-Hour-Number)
    GBK/Infotrac ID 105860: (domestic) 1 800 535 5053 or international (001) 352 323 3500

2 Hazard(s) identification

- Classification of the substance or mixture
  Flam. Liq. 2 H225 Highly flammable liquid and vapor.
  Carc. 2  H351 Suspected of causing cancer.
  Eye Dam. 1 H318 Causes serious eye damage.
  Skin Irrit. 2  H315 Causes skin irritation.

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

  GHS02  GHS05  GHS08

- Signal word Danger

- Hazard-determining components of labeling:
  titanium tetrabutanolate
  ethylbenzene

- Hazard statements
  Highly flammable liquid and vapor.
  Causes skin irritation.
  Causes serious eye damage.
  Suspected of causing cancer.

- Precautionary statements
  Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  Use explosion-proof electrical/ventilating/lighting/equipment.
  IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)
Trade name: Universal Adhesive - Silikon

3 Composition/information on ingredients

- Chemical characterization: Mixtures

<table>
<thead>
<tr>
<th>Chemical Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>141-78-6 ethyl acetate</td>
<td>10-25%</td>
</tr>
<tr>
<td>1330-20-7 xylene, mixed isomers, pure</td>
<td>5-10%</td>
</tr>
<tr>
<td>5593-70-4 titanium tetrabutanolate</td>
<td>0-5%</td>
</tr>
<tr>
<td>100-41-4 ethylbenzene</td>
<td>0-5%</td>
</tr>
</tbody>
</table>

4 First-aid measures

- Description of first aid measures
  - After inhalation Supply fresh air; consult doctor in case of complaints.
  - After skin contact Generally the product does not irritate the skin.
  - After eye contact Rinse opened eye for several minutes under running water.
  - After swallowing Induce vomiting and seek advice of physician.

- 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 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents CO2, sand, extinguishing powder. Do not use water.
  - For safety reasons unsuitable extinguishing agents
    Water.
    Water with full jet.

- Special hazards arising from the substance or mixture Can form explosive gas-air mixtures.

- Advice for firefighters
  - Protective equipment: No special measures required.
  - Additional information -

* USA (Contd. on page 3)
6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Prevent seepage into sewage system, workpits and cellars.
- Methods and material for containment and cleaning up:
  Absorb with liquid binding material (diatomite, universal binders, for small amounts tissues).
  Do not flush with water or aqueous cleansing agents.
- Reference to other sections
  No dangerous substances are released.
  See Section 8 for information on personal protection equipment.

7 Handling and storage

- Precautions for safe handling
  Keep receptacles tightly sealed.
- Information about protection against explosions and fires:
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities
  - Storage
    - Requirements to be met by storerooms and receptacles: Store in a cool location.
    - Information about storage in one common storage facility: Not required.
    - Further information about storage conditions:
      Store in cool, dry conditions in well sealed receptacles.
- 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:
    141-78-6 ethyl acetate
    - PEL () 1400 mg/m³, 400 ppm
    - REL () 1400 mg/m³, 400 ppm
    - TLV () 1440 mg/m³, 400 ppm

    1330-20-7 xylene, mixed isomers, pure
    - PEL () 435 mg/m³, 100 ppm
    - REL () Short-term value: 655 mg/m³, 150 ppm
      Long-term value: 435 mg/m³, 100 ppm
      (o-, m-, & p-isomers)
    - TLV () Short-term value: 651 mg/m³, 150 ppm
      Long-term value: 434 mg/m³, 100 ppm
      BEI

    100-41-4 ethylbenzene
    - PEL () 435 mg/m³, 100 ppm
    - REL () Short-term value: 545 mg/m³, 125 ppm
      Long-term value: 435 mg/m³, 100 ppm
    - TLV () Short-term value: 543 mg/m³, 125 ppm
      Long-term value: 434 mg/m³, 100 ppm
      BEI
Trade name: Universal Adhesive - Silikon

- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
  - Personal protective equipment
    - General protective and hygienic measures
      Wash hands before breaks and at the end of work.
    - Breathing equipment: Not required.
  - Protection of hands: Not required.
    - 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 break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:
    - Natural rubber, NR
  - Eye protection: Not absolutely necessary.
  - Body protection: Light weight protective clothing

9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Fluid
      - Color: Blue
      - Odor: Ester-like
  - Change in condition
    - Melting point/Melting range: undetermined
    - Boiling point/Boiling range: >70 °C (>158 °F)
  - Flash point: 3 °C (37 °F)
  - Ignition temperature: >400 °C (>752 °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: 2.1 Vol %
    - Upper: 11.5 Vol %
  - Vapor pressure at 20 °C (68 °F): 102 hPa (77 mm Hg)
  - Density at 20 °C (68 °F): 1.100 g/cm³ (9.18 lbs/gal)
  - Solubility in / Miscibility with
    - Water: Not miscible or difficult to mix
  - Solvent content:
    - VOC USA 353.5 g/l / 2.95 lb/gl
  - Other information: No further relevant information available.

10 Stability and reactivity

- Possibility of hazardous reactions No dangerous reactions known
Trade name: Universal Adhesive - Silikon

- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: none

11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
    - LD/LC50 values that are relevant for classification:
      Oral LD50 > 10000 mg/kg (rat)
  - Primary irritant effect:
    - on the skin: No irritant effect.
    - on the eye: No irritating effect.
  - Sensitization: No sensitizing effects known.
  - Additional toxicological information:

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    1330-20-7 xylene, mixed isomers, pure 3
    100-41-4 ethylbenzene 2B
  - 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.
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
  - 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: Disposal must be made according to official regulations.
Trade name: **Universal Adhesive - Silikon**

### 14 Transport information

<table>
<thead>
<tr>
<th><strong>UN-Number</strong></th>
<th><strong>DOT</strong></th>
<th><strong>ADR, IMDG, IATA</strong></th>
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<tbody>
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<td>UN1866</td>
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<table>
<thead>
<tr>
<th><strong>UN proper shipping name</strong></th>
<th><strong>ADR</strong></th>
<th><strong>IMDG, IATA</strong></th>
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<td></td>
<td>1866 RESIN SOLUTION</td>
<td>RESIN SOLUTION</td>
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<table>
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<tr>
<th><strong>Transport hazard class(es)</strong></th>
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<tr>
<td><strong>DOT</strong></td>
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<tr>
<td>- <strong>Class</strong></td>
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<td>- <strong>Label</strong></td>
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<tr>
<th><strong>Packing group</strong></th>
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<td><strong>DOT, ADR, IMDG, IATA</strong></td>
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<tr>
<th><strong>Environmental hazards:</strong></th>
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<tbody>
<tr>
<td><strong>Marine pollutant:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Special precautions for user</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Danger code (Kemler):</strong></td>
</tr>
<tr>
<td><strong>EMS Number:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable.</td>
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<table>
<thead>
<tr>
<th><strong>Transport/Additional information:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UN &quot;Model Regulation&quot;:</strong></td>
</tr>
</tbody>
</table>

### 15 Regulatory information

<table>
<thead>
<tr>
<th><strong>Safety, health and environmental regulations/legislation specific for the substance or mixture</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SARA Section 355 (extremely hazardous substances)</strong></td>
</tr>
<tr>
<td>None of the ingredients is listed.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Cancerogenity categories</strong></th>
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<tbody>
<tr>
<td><strong>TLV (Threshold Limit Value established by ACGIH)</strong></td>
</tr>
<tr>
<td>1330-20-7 xylene, mixed isomers, pure</td>
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(Contd. of page 5)
Trade name: Universal Adhesive - Silikon

- **Hazard pictograms**
  
  ![Hazard pictograms](image)
  GHS02  GHS05  GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  - titanium tetrabutanolate
  - ethylbenzene

- **Hazard statements**
  - Highly flammable liquid and vapor.
  - Causes skin irritation.
  - Causes serious eye damage.
  - Suspected of causing cancer.

- **Precautionary statements**
  - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - Use explosion-proof electrical/ventilating/lighting/equipment.
  - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - Store locked up.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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**16 Other information**

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Date of preparation / last revision** 05/12/2015 / -

- **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)
  - NFPA: National Fire Protection Association (USA)
  - HMIS: Hazardous Materials Identification System (USA)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - Flam. Lq. 2: Flammable liquids, Hazard Category 2
  - Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
  - Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
  - Carc. 2: Carcinogenicity, Hazard Category 2

* Data compared to the previous version altered.