1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
  - **Trade name:** Ultra-Blend™ plus
  - **Article number:** 41601, 41618
  - **Index number:** SDS 39-001.12
  - **Relevant identified uses of the substance or mixture and uses advised against:** Professional Dental Liner
  - **Application of the substance / the mixture:** Professional Dental Liner

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    - Ultradent Products Inc.
    - 505 W. Ultradent Drive (10200 S)
    - South Jordan, UT 84095-3942
    - USA
    - onlineordersupport@utradent.com
  - **EC Responsible Person**
    - Ultradent Products GmbH
    - Am Westhover Berg 30
    - 51149 Cologne Germany
    - Email: infoDe@utradent.com
    - Emergency Phone: +49(0)2203-35-92-0
  - **Further information obtainable from:** Customer Service
  - **Emergency telephone number:**
    - CHEMTREC (NORTH AMERICA) : (800) 424-9300
    - (INTERNATIONAL) : +(703) 527-3887

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
  - ![GHS05 corrosion](image)
  - **Skin Corr. 1A** H314 Causes severe skin burns and eye damage.
  - **Eye Dam. 1** H318 Causes serious eye damage.
  - ![GHS07](image)
  - **Skin Sens. 1** H317 May cause an allergic skin reaction.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The Regulation EC 1272/2008 on classification, labeling and packaging of substances and mixtures (CLP) shall not apply to a medical device in the finished state used in direct physical contact with the human body according to Art. 1.5 (d). Therefore, the product is exempted from the CLP labeling requirements, and no SDS is required by Regulation 1907/2006, Art. 2 (6c), REACH. Therefore, all given data, classification, and information on this SDS are provided solely on a voluntary basis.

- **Hazard pictograms** GHS05, GHS07
- **Signal word** Danger

(Contd. on page 2)
· Hazard-determining components of labelling:
  Diurethane Dimethacrylate
  Trade Secret
  Calcium Hydroxide
  Triethylene Glycol Dimethacrylate
  Amine Methacrylate

· Hazard statements
  H314 Causes severe skin burns and eye damage.
  H317 May cause an allergic skin reaction.

· Precautionary statements
  P101 If medical advice is needed, have product container or label at hand.
  P102 Keep out of reach of children.
  P103 Read label before use.
  P260 Do not breathe dusts or mists.
  P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P310 Immediately call a POISON CENTER/doctor.
  P405 Store locked up.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
  · Results of PBT and vPvB assessment
    · PBT: Not applicable.
    · vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures
  · Description: Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>CAS</th>
<th>EINECS</th>
<th>Trade Secret</th>
<th>Danger components</th>
</tr>
</thead>
<tbody>
<tr>
<td>72869-86-4</td>
<td>276-957-5</td>
<td>Diurethane Dimethacrylate</td>
<td>&gt;50-%&lt;100%</td>
</tr>
<tr>
<td>7727-43-7</td>
<td>231-784-4</td>
<td>Barium Sulfate</td>
<td>&gt;10-%&lt;25%</td>
</tr>
<tr>
<td>1305-62-0</td>
<td>215-137-3</td>
<td>Calcium Hydroxide</td>
<td>&gt;2.5-%&lt;10%</td>
</tr>
<tr>
<td>109-16-0</td>
<td>203-652-6</td>
<td>Triethylene Glycol Dimethacrylate</td>
<td>&gt;2.5-%&lt;10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Amine Methacrylate</td>
<td>≤2.5%</td>
</tr>
</tbody>
</table>

· Additional information: For the wording of the listed hazard phrases refer to section 16.
4 First aid measures

- Description of first aid measures
  - General information: Immediately remove any clothing soiled by the product.
  - After inhalation: This product is a thick paste, therefore inhalation is extremely unlikely.
  - After skin contact:
    Immediately wash with water and soap and rinse thoroughly.
    If skin irritation continues, consult a doctor.
  - After eye contact:
    Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  - After swallowing:
    Do not induce vomiting. Seek medical help if necessary.
- 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:
    Foam, dry chemical, carbon dioxide
    Use fire extinguishing methods suitable to surrounding conditions.
  - Special hazards arising from the substance or mixture
    During heating or in case of fire poisonous gases are produced.
  - Advice for firefighters:
    - Protective equipment:
      Wear fully protective suit.
      Mouth respiratory protective device.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  - Mount respiratory protective device.
  - Wear protective equipment. Keep unprotected persons away.
  - 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).
    Dispose contaminated material as waste according to item 13.
    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:
    Ensure good ventilation/exhaustion at the workplace.
    Prevent formation of aerosols.
  - Information about fire - and explosion protection: Keep respiratory protective device available.
Trade name: Ultra-Blend™ plus

- Conditions for safe storage, including any incompatibilities
- 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:
    - Protect from exposure to the light.
    - Keep container tightly sealed.
  - Specific end use(s) Professional Dental Liner

8 Exposure controls/personal protection

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

- Control parameters

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Limit values</th>
</tr>
</thead>
<tbody>
<tr>
<td>7727-43-7 Barium Sulfate</td>
<td>Long-term value: 10* 4** mg/m³</td>
</tr>
<tr>
<td></td>
<td>**inhalable dust **respirable dust</td>
</tr>
<tr>
<td>1305-62-0 Calcium Hydroxide</td>
<td>Short-term value: 4* mg/m³</td>
</tr>
<tr>
<td></td>
<td>Long-term value: 5 1* mg/m³</td>
</tr>
<tr>
<td></td>
<td>*respirable fraction</td>
</tr>
</tbody>
</table>

- Additional information: The lists valid during the making were used as basis.

- Exposure controls
- 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.
    - Avoid contact with the eyes.
    - Avoid contact with the eyes and skin.
  - Respiratory protection:
    - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
  - Protection of hands:
    - Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves
The selection of 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 breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.
9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Information on basic physical and chemical properties</em></td>
<td></td>
</tr>
<tr>
<td><em>General Information</em></td>
<td></td>
</tr>
<tr>
<td><strong>Appearance:</strong></td>
<td></td>
</tr>
<tr>
<td>Form</td>
<td>Paste</td>
</tr>
<tr>
<td>Colour</td>
<td>According to product specification</td>
</tr>
<tr>
<td><strong>Odour:</strong></td>
<td>Acrylic</td>
</tr>
<tr>
<td><strong>Odour threshold:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>pH-value:</strong></td>
<td>Not applicable (non-aqueous)</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point:</td>
<td>Undetermined.</td>
</tr>
<tr>
<td>Initial boiling point and boiling range:</td>
<td>Undetermined.</td>
</tr>
<tr>
<td><strong>Flash point:</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas):</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Decomposition temperature:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature:</strong></td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td><strong>Explosion properties:</strong></td>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td><strong>Explosion limits:</strong></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Upper</td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Vapour pressure:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Density at 20 °C:</strong></td>
<td>1.33-1.39 g/cm³</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Vapour 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>Not miscible or difficult to mix.</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>VOC (EC)</td>
<td>0.00 %</td>
</tr>
<tr>
<td><strong>Other information</strong></td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

(Contd. on page 6)
10 Stability and reactivity

- **Reactivity**: Stable
- **Chemical stability**:
- **Thermal decomposition / conditions to be avoided**: No decomposition if used according to specifications.
- **Possibility of hazardous reactions**: No dangerous reactions known.
- **Conditions to avoid**: Light
- **Incompatible materials**:
  - Metals
  - Strong Acids
- **Hazardous decomposition products**: No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**: Based on available data, the classification criteria are not met.

<table>
<thead>
<tr>
<th>LD/LC50 values relevant for classification:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>72869-86-4 Diurethane Dimethacrylate</td>
<td></td>
</tr>
<tr>
<td>Oral LD50</td>
<td>&gt;5,000 mg/kg (rat)</td>
</tr>
<tr>
<td>7727-43-7 Barium Sulfate</td>
<td></td>
</tr>
<tr>
<td>Oral LD50</td>
<td>&gt;3,000 mg/kg (mouse)</td>
</tr>
<tr>
<td>307,000 mg/kg (rat)</td>
<td></td>
</tr>
<tr>
<td>1305-62-0 Calcium Hydroxide</td>
<td></td>
</tr>
<tr>
<td>Oral LD50</td>
<td>7,340 mg/kg (rat)</td>
</tr>
<tr>
<td>109-16-0 Triethylene Glycol Dimethacrylate</td>
<td></td>
</tr>
<tr>
<td>Oral LD50</td>
<td>&gt;5,000 mg/kg (rat)</td>
</tr>
<tr>
<td>LC50 Fish 16.4 mg/l (Fish) (Toxicity to fish)</td>
<td></td>
</tr>
<tr>
<td>Oral LD50</td>
<td>&gt;2,000 mg/kg (mouse)</td>
</tr>
<tr>
<td>1307-00-0 Amine Methacrylate</td>
<td></td>
</tr>
<tr>
<td>Oral LD50</td>
<td>1,550 mg/kg (rat)</td>
</tr>
<tr>
<td>LC50 Fish 19 mg/l (Fish)</td>
<td></td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>2,000 mg/kg (rabbit)</td>
</tr>
<tr>
<td>Inhalative LC50/4 h 96 mg/l (rat)</td>
<td></td>
</tr>
</tbody>
</table>
- **Primary irritant effect**: Skin corrosion/irritation
  - Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**: Causes serious eye damage.
- **Respiratory or skin sensitisation**: May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
  - **Germ cell mutagenicity**: Based on available data, the classification criteria are not met.
  - **Carcinogenicity**: Based on available data, the classification criteria are not met.
  - **Reproductive toxicity**: Based on available data, the classification criteria are not met.
  - **STOT-single exposure**: Based on available data, the classification criteria are not met.
  - **STOT-repeated exposure**: Based on available data, the classification criteria are not met.
12 Ecological information

- **Toxicity**

  - **Aquatic toxicity:**
    - 72869-86-4 Diurethane Dimethacrylate
      - Biodegradability: 28 days (Aerobic) (Biodegradability testing)
      - EC50: >0.6 mg/l (Algae) (Toxicity to algae)
      - >1.2 mg/l (daphnia) (Toxicity to aquatic invertebrates)
    - 7727-43-7 Barium Sulfate
      - EC50: 32 mg/l (daphnia)
    - 109-16-0 Triethylene Glycol Dimethacrylate
      - Biodegradability: 28 days (Aerobic) (Biodegradability testing)
      - Aquatic toxicity: 32 mg/l (daphnia) (No Observed Effect Concentration)
      - EC50: >100 mg/l (Algae) (Toxicity to algae)
    - Amine Methacrylate
      - EC50: 42 mg/l (Algae)

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

- **Behaviour 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 (German Regulation) (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.
      - Must not reach sewage water or drainage ditch undiluted or unneutralised.
    - **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 together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**
  - HP8 Corrosive
  - HP13 Sensitising

- **Uncleaned packaging:**

- **Recommendation:** Disposal must be made according to official regulations.
14 Transport information

- **UN-Number**
  - ADR, ADN, IMDG, IATA: not regulated

- **UN proper shipping name**
  - ADR, ADN, IMDG, IATA: not regulated

- **Transport hazard class(es)**
  - ADR, ADN, IMDG, IATA: not regulated

- **Packing group**
  - ADR, IMDG, IATA: not regulated

- **Environmental hazards**: Not applicable.
- **Special precautions for user**: Not applicable.
- **Transport in bulk according to Annex II of Marpol and the IBC Code**: Not applicable.
- **UN "Model Regulation"**: not regulated

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- **Chemical safety assessment**
  - Device is biocompatible when used as directed by dental professionals per ISO 10993-1

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.

- **Relevant phrases**
  - H302 Harmful if swallowed.
  - H312 Harmful in contact with skin.
  - H314 Causes severe skin burns and eye damage.
  - H315 Causes skin irritation.
  - H317 May cause an allergic skin reaction.
  - H318 Causes serious eye damage.
  - H319 Causes serious eye irritation.

- **Department issuing SDS**: Regulatory Affairs
- **Contact**: Customer Service
- **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
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - 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)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
### Trade name: Ultra-Blend™ plus

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBT: Persistent, Bioaccumulative and Toxic</td>
<td></td>
</tr>
<tr>
<td>vPvB: very Persistent and very Bioaccumulative</td>
<td></td>
</tr>
<tr>
<td>Acute Tox. 4: Acute toxicity – Category 4</td>
<td></td>
</tr>
<tr>
<td>Skin Corr. 1A: Skin corrosion/irritation – Category 1A</td>
<td></td>
</tr>
<tr>
<td>Skin Irrit. 2: Skin corrosion/irritation – Category 2</td>
<td></td>
</tr>
<tr>
<td>Eye Dam. 1: Serious eye damage/eye irritation – Category 1</td>
<td></td>
</tr>
<tr>
<td>Eye Irrit. 2: Serious eye damage/eye irritation – Category 2</td>
<td></td>
</tr>
<tr>
<td>Skin Sens. 1: Skin sensitisation – Category 1</td>
<td></td>
</tr>
</tbody>
</table>