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

- Product identifier
- Trade name: Ultradent® LC Block-Out Resin
- Article number: 10318
- Index number: SDS 30-001.11
- Relevant identified uses of the substance or mixture and uses advised against: Dental Laboratory Resin
- Application of the substance / the mixture: Dental Laboratory Resin

- 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
    GHS07

    Acute Tox. 4 H332 Harmful if inhaled.
    Skin Sens. 1 H317 May cause an allergic skin reaction.

- Label elements
  - Labelling according to Regulation (EC) No 1272/2008 Void
  - Hazard pictograms
    GHS07

- Signal word: Warning

- Hazard-determining components of labelling:
  Diurethane Dimethacrylate
  Triethylene Glycol Dimethacrylate
  Amine Methacrylate

(Contd. on page 2)
Trade name: Ultradent™ LC Block-Out Resin

· **Hazard statements**
  H332 Harmful if inhaled.
  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.
  P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
  P271 Use only outdoors or in a well-ventilated area.
  P272 Contaminated work clothing should not be allowed out of the workplace.
  P280 Wear protective gloves.
  P302+P352 IF ON SKIN: Wash with plenty of water.
  P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  P312 Call a POISON CENTER/doctor if you feel unwell.
  P362+P364 Take off contaminated clothing and wash it before reuse.
  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>Dangerous components</th>
<th>Description</th>
<th>CAS:</th>
<th>EINECS:</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diurethane Dimethacrylate</td>
<td></td>
<td>72869-86-4</td>
<td>276-957-5</td>
<td>&lt;90%</td>
</tr>
<tr>
<td>Triethylene Glycol Dimethacrylate</td>
<td></td>
<td>109-16-0</td>
<td>203-652-6</td>
<td>&lt;25%</td>
</tr>
<tr>
<td>Amine Methacrylate</td>
<td></td>
<td></td>
<td></td>
<td>&lt;1%</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.
    Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  · **After inhalation:**
    This product is a viscous gel, therefore chance of inhalation is extremely low.
    Seek medical treatment 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.
  · **After swallowing:**
    Rinse out mouth and then drink plenty of water.
Safety data sheet
according to 1907/2006/EC, Article 31

Trade name: Ultradent™ LC Block-Out Resin

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:
    Water spray
    Foam
    Fire-extinguishing powder
    Use fire extinguishing methods suitable to surrounding conditions.
  · Special hazards arising from the substance or mixture
    Carbon monoxide (CO)
    Nitrogen oxides (NOx)
    During fire, gases hazardous to health may be formed.

· Advice for firefighters:
  · Protective equipment:
    Wear fully protective suit.
    Mouth respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures Not required.
· 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:
    Keep receptacles tightly sealed.
    Ensure good ventilation/exhaustion at the workplace.
    Prevent formation of aerosols.
  · Information about fire - and explosion protection: No special measures required.

· Conditions for safe storage, including any incompatibilities
• Storage:
  · Requirements to be met by storerooms and receptacles:
    Store in a cool location.
    Store only in the original receptacle.
  · Information about storage in one common storage facility:
    Store away from oxidising agents.
Store away from foodstuffs.

- **Further information about storage conditions:**
  - Protect from heat and direct sunlight.
  - See product labelling.
  - Keep container tightly sealed.
- **Specific end use(s)** Dental Laboratory Resin

### 8 Exposure controls/personal protection

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

- **Control parameters**

- **Ingredients 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 valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**
  - Do not eat or drink while working.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.

- **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.

- **Eye protection:** Goggles recommended during refilling

- **Body protection:** Protective work clothing

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**
  - **Form:** Gel
  - **Colour:** Blue
## 10 Stability and reactivity

- **Reactivity**: No further relevant information available.
- **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
    - UV light
- **Incompatible materials**: Strong oxidizing agents
- **Hazardous decomposition products**: No dangerous decomposition products known.

### Trade name: Ultradent™ LC Block-Out Resin

| · Odour: | Methacrylate |
| · Odour threshold: | Not determined. |
| · pH-value: | Not applicable (non-aqueous) |
| · Change in condition | |
|   - Melting point/freezing point: | <25 °C |
|   - Initial boiling point and boiling range: | >100 °C |
| · Flash point: | Not applicable. |
| · Flammability (solid, gas): | Not applicable. |
| · Decomposition temperature: | 260 °C (TGA trace) |
| · Auto-ignition temperature: | Product is not selfigniting. |
| · Explosive properties: | Product does not present an explosion hazard. |
| · Explosion limits: | |
|   - Lower: | Not determined. |
|   - Upper: | Not determined. |
| · Vapour pressure: | Not determined. |
| · Density at 20 °C: | 1.1-1.2 g/cm³ |
| · Relative density | Not determined. |
| · Vapour density | Not determined. |
| · Evaporation rate | Not determined. |
| · Solubility in / Miscibility with water: | Insoluble. |
| · Partition coefficient: n-octanol/water: | Not determined. |
| · Viscosity: | |
|   - Dynamic at 20 °C: | 46,000 cps |
|   - Kinematic: | Not determined. |
| · Solvent content: | |
|   - VOC (EC) | <1% |
| · Solids content: | <30.0 % |
| · Other information | No further relevant information available. |
11 Toxicological information

- Information on toxicological effects
- Acute toxicity
  Harmful if inhaled.

- LD/LC50 values relevant for classification:

  **ATE (Acute Toxicity Estimates)**

  | Inhalative | LC50/4 h | 3.71 mg/l (rat) |

| 72869-86-4 Diurethane Dimethacrylate |
| Oral | LD50 | >5,000 mg/kg (rat) |

| 109-16-0 Triethylene Glycol Dimethacrylate |
| Oral | LD50 | >5,000 mg/kg (rat) |
| Dermal | LC50 Fish | 16.4 mg/l (Fish) (Toxicity to fish) |
| Dermal | LD50 | >2,000 mg/kg (mouse) |

| Amine Methacrylate |
| Oral | LD50 | 1,550 mg/kg (rat) |
| LC50 Fish | 19 mg/l (Fish) |
| Dermal | LD50 | 2,000 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 96 mg/l (rat) |

- Primary irritant effect:
  - Skin corrosion/irritation Based on available data, the classification criteria are not met.
  - Serious eye damage/irritation Based on available data, the classification criteria are not met.
  - 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.
- Aspiration hazard 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) |

    | 109-16-0 Triethylene Glycol Dimethacrylate |
    | Biodegradability | 28 days (Aerobic) (Biodegradability testing) |
    | Aqua toxicity | 32 mg/l (daphnia) (No Observed Effect Concentration) |
    | EC50 | >100 mg/l (Algae) (Toxicity to algae) |

    | Amine Methacrylate |
    | EC50 | 42 mg/l (Algae) |
51.0.1 · 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.
· 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: Do not allow product to reach sewage system.
· European waste catalogue
  HP13 Sensitising
· Uncleaned packaging:
  · Recommendation: Disposal must be made according to official regulations.

14 Transport information
· UN-Number
  · ADR, IMDG, IATA: not regulated
· UN proper shipping name
  · ADR, IMDG, IATA: not regulated
· Transport hazard class(es)
  · ADR, ADN, IMDG, IATA: not regulated
· Class
  · ADR, 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 applicable.

15 Regulatory information
· Safety, health and environmental regulations/legislation specific for the substance or mixture
  · Directive 2012/18/EU
  · Named dangerous substances - ANNEX I: None of the ingredients is listed.
  · 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.
  H315 Causes skin irritation.
  H317 May cause an allergic skin reaction.
  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
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Acute Tox. 4: Acute toxicity - oral – Category 4
  Skin Irrit. 2: Skin corrosion/irritation – Category 2
  Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
  Skin Sens. 1: Skin sensitisation – Category 1