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

1.1 Product identifier

- Trade name: Gluma Desensitizer

1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier:
  Kulzer GmbH
  Leipziger Straße 2, 63450 Hanau (Germany) Tel.: +49 (0)800 4372522
- Informing department: E-Mail: msds@kulzer-dental.com
- Emergency telephone number: Emergency CONTACT (24-Hour-Number): +49 (0)6132-84463

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008
  Skin Irrit. 2  H315  Causes skin irritation.
  Eye Dam. 1  H318  Causes serious eye damage.
  Resp. Sens. 1  H334  May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  Skin Sens. 1  H317  May cause an allergic skin reaction.
  STOT SE 3  H335  May cause respiratory irritation.

2.2 Label elements

- Labelling according to Regulation (EC) No 1272/2008
  The product is classified and labelled according to the CLP regulation.
  - Hazard pictograms
    - GHS05
    - GHS07
    - GHS08

- Signal word  Danger

- Hazard-determining components of labelling:
  2-hydroxyethyl methacrylate
  glutaral

- Hazard statements
  H315 Causes skin irritation.
  H318 Causes serious eye damage.
  H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  H317 May cause an allergic skin reaction.
  H335 May cause respiratory irritation.

- Precautionary statements
  P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
  P280 Wear protective gloves / eye protection / face protection.
  P285 In case of inadequate ventilation wear respiratory protection.
  P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P321 Specific treatment (see on this label).
  P405 Store locked up.

2.3 Other hazards -
Trade name: Gluma Desensitizer

- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- 3.2 Chemical characterisation: Mixtures
  - Description:
  - Dangerous components:
    - CAS: 868-77-9  EINECS: 212-782-2  2-hydroxyethyl methacrylate
      Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317  25-50%
    - CAS: 111-30-8  EINECS: 203-856-5  glutaral
      Acute Tox. 3, H301; Acute Tox. 3, H331; Resp. Sens. 1, H334; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Skin Sens. 1, H317  5-10%
  - Additional information
    For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- 4.1 Description of first aid measures
  - After inhalation
    Supply fresh air; consult doctor in case of symptoms.
  - After skin contact
    Instantly rinse with water.
    If skin irritation continues, consult a doctor.
  - After eye contact
    Rinse opened eye for several minutes under running water. Then consult doctor.
  - After swallowing
    Rinse out mouth and then drink plenty of water.
    In case of persistent symptoms consult doctor.
- 4.2 Most important symptoms and effects, both acute and delayed
  No further relevant information available.
- 4.3 Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
  - Suitable extinguishing agents
    CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- 5.2 Special hazards arising from the substance or mixture
  - Formation of toxic gases is possible during heating or in case of fire.
- 5.3 Advice for firefighters
  - Protective equipment: Put on breathing apparatus.
  - Additional information

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
  Not required.
- 6.2 Environmental precautions: No special measures required.
- 6.3 Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (diatomite, universal binders, for small amounts tissues).
  Dispose of contaminated material as waste according to item 13.
  Send for recovery or disposal in suitable containers.

(Contd. on page 3)
Trade name: Gluma Desensitizer

6.4 Reference to other sections
See Section 13 for information on disposal.
See Section 8 for information on personal protection equipment.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Keep containers tightly sealed.
Wear protective equipment. Keep unprotected persons away.
Ensure good ventilation/exhaustion at the workplace.
- Information about protection against explosions and fires: No special measures required.

7.2 Conditions for safe storage, including any incompatibilities
- Storage
  - Requirements to be met by storerooms and containers: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: None.
- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
- Components with critical values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Component</th>
<th>Short-term value</th>
<th>Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>111-30-8 glutaral</td>
<td>0.2 mg/m³, 0.05 ppm</td>
<td>0.2 mg/m³, 0.05 ppm</td>
</tr>
<tr>
<td>Sen</td>
<td>0.7 mg/m³, 0.2 ppm</td>
<td></td>
</tr>
</tbody>
</table>

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

8.2 Exposure controls
- Personal protective equipment
  - General protective and hygienic measures
    Keep away from foodstuffs, beverages and food.
    Instantly remove any soiled and impregnated garments.
    Wash hands during breaks and at the end of the work.
    Avoid contact with the eyes and skin.
  - Breathing equipment:
    Not neccessary with efficient local exhaust. If exposition to vapours is possible, use breathing protective mask (filter A).
  - Protection of hands:
    The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
    Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
    If skin contact cannot be avoided, protective gloves are recommended to avoid possible sensitization.
    Solvent resistant gloves
    Check protective gloves prior to each use for their proper condition.
    recommended
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. 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.

For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:
- Butyl rubber, BR
- Nitrile rubber, NBR

Eye protection:
Before use, put on the protective goggles and cover the patient’s eyes to protect against splashes of material.
Tightly sealed safety glasses.

Body protection: Light weight protective clothing

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties

  - General Information
  - Appearance:
    - Form: Fluid
gel
  - Colour: Colourless
  - Smell: Aromatic
  - Odour threshold: Not determined.

  - pH-value at 20 °C: 4.0

  - Change in condition
    - Melting point/freezing point: Not determined
    - Initial boiling point and boiling range: 100 °C

  - Flash point: Not applicable

  - Inflammability (solid, gaseous) Not applicable.

  - Ignition temperature: 230.0 °C

  - Decomposition temperature: Not determined.

  - Self-inflammability: Product is not selfigniting.

  - Explosive properties: Product is not explosive.

  - Critical values for explosion:
    - Lower: Not determined.
    - Upper: Not determined.

  - Steam pressure at 20 °C: 23 hPa

  - Density at 20 °C: 1.16 g/cm³
    - Relative density Not determined.
    - Vapour density Not determined.
    - Evaporation rate Not determined.

(Contd. on page 5)
Trade name: Gluma Desensitizer

- Solubility in / Miscibility with
  - Water: Not miscible or difficult to mix

- Partition coefficient: n-octanol/water: Not determined.

- Viscosity:
  - dynamic: Not determined.
  - kinematic: Not determined.

- Solvent content:
  - Water: 58.8 %
  - VOC EU g/l

9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

- 10.1 Reactivity No further relevant information available.
- 10.2 Chemical stability
  - Conditions to be avoided: No decomposition if used and stored according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: None

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
  - Acute toxicity Based on available data, the classification criteria are not met.
    - LD/LC50 values that are relevant for classification:
      - Oral LD50 > 2000 mg/kg (rat)
      - 868-77-9 2-hydroxyethyl methacrylate
        - Oral LD50 5564 mg/kg (rat)
        - Dermal LD50 >3000 mg/kg (can)

  - Primary irritant effect:
    - Skin corrosion/irritation
    - Causes skin irritation.
    - Serious eye damage/irritation
    - Causes serious eye damage.
    - Respiratory or skin sensitisation
    - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
    - May cause an allergic skin reaction.

  - CMR effects (carcinogenity, 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
    - May cause respiratory irritation.

  - 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.

(Contd. on page 6)
SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

868-77-9 2-hydroxyethyl methacrylate

LC50/96h: 227 mg/l (fish)

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

Additional ecological information:

General notes:
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into soil.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Waste disposal key number: 52102

European waste catalogue

18 01 06 chemicals consisting of or containing dangerous substances

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number

ADR, ADN, IMDG, IATA Void

14.2 UN proper shipping name

ADR, ADN, IMDG, IATA Void

14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA Class Void

14.4 Packing group

ADR, IMDG, IATA Void

14.5 Environmental hazards:

Marine pollutant: No

14.6 Special precautions for user Not applicable.

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Safety data sheet
according to 1907/2006/EC, Article 31

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14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable.

Transport/Additional information:
-
UN "Model Regulation": Void

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REGULATION (EC) No 1907/2006 ANNEX XVII
Conditions of restriction: 3

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

SECTION 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.

Relevant phrases
H301 Toxic if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H400 Very toxic to aquatic life.

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)
VOCV: Lenkungsabgabe auf flüchtigen organischen Verbindungen, Schweiz (Swiss Ordinance on volatile organic compounds)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 3: Acute toxicity – Category 3
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Data compared to the previous version altered.