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

- 1.1 Product identifier
- Trade name: IvoBase CAD Bond Monomer / IvoBase CAD Bond Modelling Liquid

- 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:
  Ivoclar Vivadent AG
  Bendererstrasse 2
  FL-9494 Schaan
  PRINCIPALITY OF LIECHTENSTEIN
  Tel: +423 235 35 35
  Fax: +423 235 33 60

- Further information obtainable from:
  Regulatory Affairs
  sds@ivoclarvivadent.com

- 1.4 Emergency telephone number: +423 / 235 33 13 (Ivoclar Vivadent AG, FL-9494 Schaan, Liechtenstein)

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008
  Flam. Liq. 2 H225 Highly flammable liquid and vapour.
  Skin Irrit. 2 H315 Causes skin irritation.
  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
  
  ![GHS02](image)
  ![GHS07](image)

- Signal word Danger

- Hazard-determining components of labelling:
  methyl methacrylate
  1,4-butanediol dimethacrylate

- Hazard statements
  H225 Highly flammable liquid and vapour.
  H315 Causes skin irritation.
  H317 May cause an allergic skin reaction.
  H335 May cause respiratory irritation.

- Precautionary statements
  P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
Trade name: IvoBase CAD Bond Monomer / IvoBase CAD Bond Modelling Liquid

P262 Do not get in eyes, on skin, or on clothing.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Additional information:
  Commercial medical gloves do not provide protection against the sensitizing effect of methacrylates.

2.3 Other hazards

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

SECTION 3: Composition/information on ingredients

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

<table>
<thead>
<tr>
<th>CAS:</th>
<th>Chemical Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>80-62-6</td>
<td>methyl methacrylate</td>
<td>50-100%</td>
</tr>
<tr>
<td>EINECS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>201-297-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Flamm. Liq. 2, H225; Skin Irrit. 2; H313; Skin Sens. 1, H317; STOT SE 3, H335</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS:</th>
<th>Chemical Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2082-81-7</td>
<td>1,4-butanediol dimethacrylate</td>
<td>2.5-&lt;10%</td>
</tr>
<tr>
<td>EINECS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>218-218-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin Irrit. 2, H315; Eye Irrit. 2; H319; Skin Sens. 1, H317; STOT SE 3, H335</td>
<td></td>
</tr>
</tbody>
</table>

- 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
  - General information: Immediately remove any clothing soiled by the product.
  - After inhalation:
    Supply fresh air; consult doctor in case of complaints.
    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. Then consult a doctor.
  - After swallowing:
    Rinse out mouth and then drink plenty of water.
    Do not induce vomiting; call for medical help immediately.

- 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, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  - For safety reasons unsuitable extinguishing agents: Water with full jet

- 5.2 Special hazards arising from the substance or mixture
  No further relevant information available.
SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- 6.2 Environmental precautions: Do not allow to enter sewers/surface or ground water.
- 6.3 Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Ensure adequate ventilation.
- 6.4 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.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling
  Only adequately trained personnel should handle this product.
  Ensure good ventilation/exhaustion at the workplace.
  For use in dentistry only.
- Information about fire - and explosion protection:
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.
- 7.2 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.
  - Further information about storage conditions:
    - Keep container tightly sealed.
    - Store receptacle in a well ventilated area.
    - Protect from heat and direct sunlight.
- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
- 8.1 Control parameters
  - Ingredients with limit values that require monitoring at the workplace:
    - CAS: 80-62-6 methyl methacrylate
    - WEL:
      - Short-term value: 416 mg/m³, 100 ppm
      - Long-term value: 208 mg/m³, 50 ppm
  - Additional information: The lists valid during the making were used as basis.
Safety data sheet 
according to 1907/2006/EC, Article 31

Printing date 15.03.2017 Revision: 15.03.2017 Version number 1

Trade name: IvoBase CAD Bond Monomer / IvoBase CAD Bond Modelling Liquid

(Contd. of page 3)

8.2 Exposure controls
• Personal protective equipment:
  • General protective and hygienic measures:
    Usual hygienic measures for dental practice and dental laboratories.
    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 and skin.
    Do not inhale gases / fumes / aerosols.

  • 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.

   Recommended filter device for short term use:
   Filter A1
   Filter A2
   Filter A3

  • Protection of hands:
    Protective gloves
    After use of gloves apply skin-cleaning agents and skin cosmetics.

  • Material of gloves
    Butyl rubber, BR
    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.

  • Not suitable are gloves made of the following materials:
    Commercial medical gloves do not provide protection against the sensitizing effect of methacrylates.

  • Eye protection:
    Tightly sealed goggles

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
• General Information
• Appearance:
  • Form: Fluid
  • Colour: Colourless
  • Odour: Pungent
  • Odour threshold:
  • pH-value:

• Change in condition
  • Melting point/Melting range:
  • Boiling point/Boiling range:

(Contd. on page 5)
SECTION 10: Stability and reactivity

10.1 Reactivity
No further relevant information available.

10.2 Chemical stability
Stable under normal handling and storage conditions.

10.3 Possibility of hazardous reactions
Forms explosive gas mixture with air.
Reacts with strong oxidising agents.
Exothermic polymerisation.

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 under normal conditions of storage and use.

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 relevant for classification:

<table>
<thead>
<tr>
<th>CAS: 80-62-6 methyl methacrylate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50: 7872 mg/kg (rat)</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/irritation
Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation
May cause an allergic skin reaction.

Additional toxicological information: No further relevant information available.
· 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.

SECTION 12: Ecological information

· 12.1 Toxicity
  · Aquatic toxicity: No further relevant information available.
· 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.
· General notes:
  Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
· 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 together with household garbage. Do not allow product to reach sewage system.
    Take to an approved landfill or a waste incineration plant, under conditions approved by the local authority.
· European waste catalogue
  · 18 01 06* chemicals consisting of or containing hazardous substances
· Uncleaned packaging:
  · Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1 UN-Number
  · ADR,RID,ADN, IMDG, IATA UN1247
· 14.2 UN proper shipping name
  · ADR/RID/ADN 1247 METHYL METHACRYLATE MONOMER, STABILIZED solution
  · IMDG, IATA METHYL METHACRYLATE MONOMER, STABILIZED solution
• 14.3 Transport hazard class(es)
  • ADR/RID/ADN
    • Class 3 (F1) Flammable liquids.
    • Label 3

• 14.4 Packing group
  • ADR,RID,ADN, IMDG, IATA
    • Class 3 Flammable liquids.
    • Label 3

• 14.5 Environmental hazards:
  • Marine pollutant: No

• 14.6 Special precautions for user
  • Warning: Flammable liquids.
  • Danger code (Kemler): 339
  • EMS Number: F-E,S-D
  • Stowage Category B
  • Stowage Code SW2 Clear of living quarters.

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

• Transport/Additional information:
  • ADR/RID/ADN
    • Limited quantities (LQ): 1L
    • Excepted quantities (EQ): Code: E2
    • Maximum net quantity per inner packaging: 30 ml
    • Maximum net quantity per outer packaging: 500 ml
  • Transport category 2
  • Tunnel restriction code D/E

• IMDG
  • Limited quantities (LQ): 1L
  • Excepted quantities (EQ): Code: E2
  • Maximum net quantity per inner packaging: 30 ml
  • Maximum net quantity per outer packaging: 500 ml

• UN "Model Regulation":
  • UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED SOLUTION, 3, II

SECTION 15: Regulatory information

• 15.1 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.
Trade name: IvoBase CAD Bond Monomer / IvoBase CAD Bond Modelling Liquid

- Seveso category: P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements: 5,000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements: 50,000 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

- National regulations:
- Other regulations, limitations and prohibitive regulations
  The product is a medical device according to the Directive 93/42/EEC.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 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
  H225 Highly flammable liquid and vapour.
  H315 Causes skin irritation.
  H317 May cause an allergic skin reaction.
  H319 Causes serious eye irritation.
  H335 May cause respiratory irritation.

- 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)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Flam. Liq. 2: Flammable liquids – Category 2
  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
  STOT SE 3: Specific target organ toxicity (single exposure) – Category 3