1 Identification

· Product identifier
  · Trade name: ALIKE (Liquid)

· Application of the substance / the mixture  Manufacture of dental prosthesis

· Details of the supplier of the safety data sheet
  · Manufacturer/Supplier:
    GC America Inc.
    3737 W. 127th Street
    Alsip, IL 60803
    USA

  sds@gcamerica.com

· Information department: Regulatory Affairs

· Emergency telephone number:
  During normal opening times (Mon.-Fri. 8:00 AM-5:00 PM CST): +1 (708) 597-0900
  Transportation (CHEMTREC®) Emergency Telephone No. +1 (800) 424-9300

2 Hazard identification

· Classification of the substance or mixture
  Flammable Liquids - Category 2  H225  Highly flammable liquid and vapour.
  Acute Toxicity (Oral) - Category 4  H302  Harmful if swallowed.
  Acute Toxicity (Dermal) – Category 4  H312  Harmful in contact with skin.
  Acute Toxicity (Inhalation) - Category 4  H332  Harmful if inhaled.
  Skin Irritation - Category 2  H315  Causes skin irritation.
  Skin Sensitizer - Category 1  H317  May cause an allergic skin reaction.

· Additional information:
  The information provided is in regards to the toxicity and hazard rating(s) of the individual component(s) in the formulation. The associated risk(s) depends on the route(s) of exposure. The hazard rating system is based entirely on the existence of the risk(s) and does not take into account the likelihood of reduced risk(s) through proper usage and handling.

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

· Hazard pictograms

  GHS02  GHS07

· Signal word Danger

· Hazard-determining components of labeling:
  methyl methacrylate (MMA)
  methanol
  accelerator**
  dimethacrylate**

(Contd. on page 2)
Trade name: ALIKE (Liquid)

· **Hazard statements**
  Highly flammable liquid and vapour. 
  Harmful if swallowed, in contact with skin or if inhaled. 
  Causes skin irritation. 
  May cause an allergic skin reaction. 

· **Precautionary statements**
  Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. 
  Contaminated work clothing should not be allowed out of the workplace. 
  Wear protective gloves/protective clothing/eye protection/face protection. 
  IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. 
  Store in a well-ventilated place. Keep cool. 
  Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**
  **NFPA ratings (scale 0 - 4)**
  ![NFPA ratings](2 3 2)
  Health = 2 
  Fire = 3 
  Reactivity = 2 

· **HMIS-ratings (scale 0 - 4)**
  ![HMIS-ratings](HEALTH 2 FIRE 3 REACTIVITY 2)
  Health = 2 
  Fire = 3 
  Reactivity = 2

### 3 Composition/Information on ingredients

· **Chemical characterization:** Mixtures
  **Description:** Mixture of the substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th><strong>Dangerous components:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 80-62-6 methyl methacrylate (MMA)</td>
<td>60 - 100% w/w</td>
</tr>
<tr>
<td>CAS: 67-56-1 methanol</td>
<td>5 - 10% w/w</td>
</tr>
<tr>
<td>dimethacrylate**</td>
<td>1 - 5% w/w</td>
</tr>
<tr>
<td>accelerator**</td>
<td>0.5 - 1.5% w/w</td>
</tr>
<tr>
<td>UV-light absorber**</td>
<td>0.5 - 1.5% w/w</td>
</tr>
</tbody>
</table>

· **Additional information:**
  If a substance is marked with **, then substance is a trade secret. This is allowed under OSHA’s Hazard Communication Standard (HCS) as a trade secret and under GHS as Confidential Business Information (CBI).

### 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. 
  If symptoms persist consult doctor.
Trade name: ALIKE (Liquid)

· After inhalation:
  Supply fresh air or oxygen; call for doctor.
  In case of unconsciousness place patient stably in side position for transportation.
  Do not use mouth to mouth or mouth to nose resuscitation.
· After skin contact:
  Immediately wash with water and soap and rinse thoroughly.
  Seek medical treatment.
· After eye contact:
  Protect unharmed eye.
  Rinse opened eye for several minutes under running water.
  If symptoms persist consult doctor.
· After swallowing:
  Do not induce vomiting; immediately call for medical help.
  Rinse out mouth and then drink plenty of water.
· Information for doctor:
  · Most important symptoms and effects, both acute and delayed: Allergic reactions
  · Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Firefighting measures

· Extinguishing media
  · Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.
  · For safety reasons unsuitable extinguishing agents: Water

· Special hazards arising from the substance or mixture
  In case of fire, the following can be released:
  Carbon monoxide and carbon dioxide

· Advice for firefighters
  · Protective equipment:
  Mouth respiratory protective device.
  Wear self-contained respiratory protective device.

· Additional information
  Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures
  Remove persons from danger area.
  Keep away from ignition sources
  Avoid contact with the eyes and skin.
  Wear protective clothing.

· Environmental precautions:
  Do not allow product to reach sewage system or any water course.
  Do not allow to penetrate the ground/soil.

· Methods and material for containment and cleaning up:
  Ensure adequate ventilation.
  Absorb liquid components with liquid-binding material.
  Dispose of the collected material according to regulations.

· Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
7 Handling and storage

· Handling:
  · Precautions for safe handling
    Observe instructions for use.
    Ensure good ventilation/exhaustion at the workplace.
    Do not inhale dust / smoke / mist.
    Prevent formation of aerosols.
    Avoid contact with the eyes and skin.
  · Information about protection against explosions and fires:
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
    Do not spray on a naked flame or any incandescent material.

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

· Further information about storage conditions:
  · Requirements to be met by storerooms and receptacles:
    Store in a cool location.
    Store only in unopened original receptacles.
  · Information about storage in one common storage facility: Store away from foodstuffs.

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:

<table>
<thead>
<tr>
<th>CAS: 67-56-1 methanol</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL</td>
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<tr>
<td></td>
</tr>
<tr>
<td></td>
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<tr>
<td>EV</td>
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<td></td>
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</tbody>
</table>

· Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls
  · Personal protective equipment:
    · General protective and hygienic measures:
      The usual precautionary measures for handling chemicals should be followed.
      Avoid contact with the eyes and skin.
      Wash hands before breaks and at the end of work.
      Keep away from foodstuffs, beverages and feed.

(Continued on page 5)
Trade name: ALIKE (Liquid)

Immediately remove all soiled and contaminated clothing.

- **Breathing equipment:**
  - Suitable respiratory protective device recommended.

- **Protection of hands:**
  - **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 break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - **Eye protection:**
    - Manufacturing sites:
      - Wear safety glasses with side shields (or goggles).
    - Distribution, Workplace, and Household Settings:
      - No special protective equipment required.

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:**
      - **Form:** Liquid
      - **Color:** Colorless
    - **Odor:** Methacrylic
    - **Odor threshold:** Not determined.
  - **pH-value:** Not determined.
  - **Change in condition**
    - **Melting point/Melting range:** Undetermined.
    - **Boiling point/Boiling range:** 64 °C
  - **Flash point:** 12 °C
  - **Flammability (solid, gaseous):** Not applicable.
  - **Ignition temperature:** Undetermined.
  - **Decomposition temperature:** Not determined.
  - **Auto igniting:** Product is not self-igniting.

(Contd. on page 6)
Trade name: ALIKE (Liquid)

<table>
<thead>
<tr>
<th>· Danger of explosion:</th>
<th>Heating may cause an explosion. Product is not explosive. However, formation of explosive air/vapor mixtures are possible.</th>
</tr>
</thead>
</table>
| · Explosion limits:   | Lower: 2.1 Vol %  
                        | Upper: 12.5 Vol %  |
| · Vapor pressure:     | Not determined.  |
| · Density:            | Not determined.  |
| · Relative density    | Not determined.  |
| · Vapor density       | Not determined.  |
| · Evaporation rate    | Not determined.  |
| · Solubility in / Miscibility with Water: | Insoluble. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity:          | Dynamic: Not determined.  
                        | Kinematic: Not determined.  |
| · Solvent content:    | Organic solvents: 8.7 %  |
| · Other information   | No further relevant information available. |

### 10 Stability and reactivity

- **Reactivity** Danger of polymerization.
- **Chemical stability** Stable at ambient temperature.
- **Thermal decomposition / conditions to be avoided:**  
  No decomposition if used according to specifications.
- **Possibility of hazardous reactions**  
  Spontaneous polymerization can be caused in unstabilized product e.g. by ambient heat. 
  Danger of receptacles bursting because of high vapor pressure if heated. 
  Exothermic polymerization.
- **Conditions to avoid**  
  Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- **Incompatible materials:**  
  Reacts with peroxides and other radical forming substances. 
  Reacts with amines. 
  Reacts with heavy metals.
- **Hazardous decomposition products:** No dangerous decomposition products known.
11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
  - LD/LC50 values that are relevant for classification:

<table>
<thead>
<tr>
<th>CAS: 67-56-1 methanol</th>
<th>Oral LD50 13,000 mg/kg (rat (f+m))</th>
<th>Dermal LD50 12,800 mg/kg (rabbit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>accelerant**</td>
<td>Oral LD50 1,650 mg/kg (rat (f+m))</td>
<td>Dermal LD50 &gt; 2,000 mg/kg (rat (f+m))</td>
</tr>
<tr>
<td></td>
<td>Inhalative LC50/4 h 254 mg/l (rat (f+m))</td>
<td></td>
</tr>
</tbody>
</table>

- Primary irritant effect:
  - on the skin: Irritant to skin and mucous membranes.
  - on the eye: No irritating effect.
- Sensitization:
  - Sensitization possible through inhalation.
  - Sensitization possible through skin contact.

- Additional toxicological information:
  - The product shows the following dangers according to internally approved calculation methods for preparations:
    - Irritant
  - Carcinogenic categories

- IARC (International Agency for Research on Cancer)
  - methyl methacrylate (MMA) 3
  - hydroquinone (HQ) 3

- NTP (National Toxicology Program)
  - None of the ingredients is listed.

- Carcinogenic categories legend:
  - IARC Group 1: The agent is carcinogenic to humans.
  - IARC Group 2A: The agent is probably carcinogenic to humans.
  - IARC Group 2B: The agent is possibly carcinogenic to humans.
  - IARC Group 3: The agent is not classifiable as to its carcinogenicity to humans.
  - IARC Group 4: The agent is probably not carcinogenic to humans.
  - NTP K: Known to be human carcinogen.
  - NTP R: Reasonably anticipated to be human carcinogen.

- Repeated dose toxicity. No further relevant information available.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
  - No further relevant information available.
  - No further relevant information available.
12 Ecological information

- **Toxicity**
  - **Aquatic toxicity:**
    - CAS: 67-56-1 methanol
    - EC50/48h (static) 10,000 mg/l (daphnia magna) (static)
    - Intoxication
  - **Persistence and degradability** No further relevant information available.
  - **Behavior in environmental systems:**
  - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.
  - **Additional ecological information:**
    - **General notes:** Generally not hazardous for water
    - **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:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
  - **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
  - DOT, TDG, IMDG, IATA UN1993
- **UN proper shipping name**
  - DOT Flammable liquids, n.o.s. (Methyl methacrylate monomer, stabilized, Methanol)
  - TDG 1993 Flammable liquids, n.o.s. (Methyl methacrylate monomer, stabilized, Methanol)
  - IMDG, IATA FLAMMABLE LIQUID, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, METHANOL)
- **Transport hazard class(es)**
  - **DOT**
    - Class 3 Flammable liquids

(Contd. on page 9)
### Trade name: ALIKE (Liquid)

- **Label**
  - TDG, IMDG, IATA
- **Class**
  - 3 Flammable liquids
- **Label**
  - 3
- **Packing group**
  - DOT, TDG, IMDG, IATA
  - II
- **Environmental hazards:**
  - Marine pollutant: No
- **Special precautions for user**
  - Warning: Flammable liquids
- **EMS Number:**
  - F-E,S-E
- **Stowage Category**
  - B
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
  - Not applicable.

### Transport/Additional information:

- **TDG**
  - 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 1993 FLAMMABLE LIQUIDS, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED, METHANOL), 3, II

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **SARA (Superfund Amendments and Reauthorization Act)**
  - **Section 355 (extremely hazardous substances):**
    - None of the ingredients is listed.
  - **Section 313 (Specific toxic chemical listings):**
    - methyl methacrylate (MMA)
    - methanol
  - **TSCA (Toxic Substances Control Act):**
    - methanol
    - dimethacrylate**
    - accelerator**
    - UV-light absorber**
- **Canadian substance listings:**
  - **Canadian Domestic Substances List (DSL)**
    - methyl methacrylate (MMA)
Trade name: ALIKE (Liquid)

methanol
dimethacrylate**
accelerant**
UV-light absorber**

· Canadian Ingredient Disclosure list (limit 0.1%)
None of the ingredients is listed.

· Canadian Ingredient Disclosure list (limit 1%)
methyl methacrylate (MMA)
methanol

· GHS label elements
The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms

GHS02  GHS07

· Signal word  Danger

· Hazard-determining components of labeling:
methyl methacrylate (MMA)
methanol
accelerant**
dimethacrylate**

· Hazard statements
Highly flammable liquid and vapour.
Harmful if swallowed, in contact with skin or if inhaled.
Causes skin irritation.
May cause an allergic skin reaction.

· Precautionary statements
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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

16 Other information

· Department issuing SDS: Regulatory Affairs

· Contact:
  Regulatory Affairs
  Telephone No. +1 (708) 597-0900
  sds@gcamerica.com

· Date of preparation / last revision 03/13/2018 / -

· Abbreviations and acronyms:
  GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  HCS: Hazard Communication Standard (USA)
  MSDS: Material Safety Data Sheet
# Safety Data Sheet

according to HPR, Schedule 1

Printing date 03/13/2018  Version CA-EN-Rev 1  Reviewed on 01/09/2018

<table>
<thead>
<tr>
<th>Trade name: ALIKE (Liquid)</th>
</tr>
</thead>
</table>

SDS: Safety Data Sheet  
ECHA: European Chemicals Agency  
OSHA: Occupational Safety and Health Administration (USA)  
LEL: Lower Explosive Limit  
UEL: Upper Explosive Limit  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative

· **Sources**
  - Manufacturers’ MSDSs/SDSs
  - TOXNET (http://toxnet.nlm.nih.gov/)
  - ECHA (http://echa.europa.eu/)
  - EnviChem (www.echemportal.org)

· **Notes:**
  CAS Registry Number is a Registered Trademark of the American Chemical Society.  
CHEMTREC® is a registered service mark of the American Chemistry Council, Inc.

· *Data compared to the previous version altered.* This version replaces all previous versions.

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