1 Identification

· **Product identifier**

· **Trade name:** GC Fuji Automix LC (Paste B, Shades: A1, A2, and A3)

· **Relevant identified uses of the substance or mixture and uses advised against**

Dental material
The product is intended for professional use.
To avoid risks for humans and environment obtain instructions.

· **Application of the substance / the mixture** Dental filling material

· **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 (Monday–Friday 8:00 AM–5:00 PM Central Time): +1 (708) 597-0900
  Transportation (CHEMTREC®) Emergency Telephone No. +1 (800) 424-9300

2 Hazard identification

· **Classification of the substance or mixture**

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.
Serious Eye Damage - Category 1 H318 Causes serious eye damage.

· **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**

![GHS05][GHS07]

· **Signal word** Danger

· **Hazard-determining components of labeling:**

  ytterbium trifluoride
  polybasic carboxylic acid**

(Contd. on page 2)
Trade name: GC Fuji Automix LC (Paste B, Shades: A1, A2, and A3)

48.1.41

Hazard statements
Harmful if swallowed, in contact with skin or if inhaled.
Causes serious eye damage.

Precautionary statements
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Take off immediately all contaminated clothing.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:
21.6 % of the mixture consists of an ingredient or ingredients of unknown acute toxicity.

3 Composition/Information on ingredients

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

Dangerous components:

<table>
<thead>
<tr>
<th>CAS</th>
<th>Substance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>13760-80-0</td>
<td>ytterbium trifluoride</td>
<td>10 - 30% w/w *</td>
</tr>
<tr>
<td>9003-01-4</td>
<td>poly(acrylic acid)</td>
<td>10 - 30% w/w *</td>
</tr>
<tr>
<td></td>
<td>polybasic carboxylic acid**</td>
<td>3 - 7% w/w *</td>
</tr>
<tr>
<td></td>
<td>silane**</td>
<td>1 - 5% w/w *</td>
</tr>
</tbody>
</table>

* Actual concentration ranges are withheld as a trade secret.

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.
If symptoms persist consult doctor.

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: Seek medical treatment.

After eye contact:
Protect unharmed eye.
Rinse opened eye for several minutes under running water.
Call a doctor immediately.

After swallowing:
Do not induce vomiting; immediately call for medical help.
Rinse out mouth and then drink plenty of water.

(Contd. on page 3)
Trade name: GC Fuji Automix LC (Paste B, Shades: A1, A2, and A3)

- 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:
    CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use fire fighting measures that suit the environment.
  - For safety reasons unsuitable extinguishing agents: Water with full jet
  - Special hazards arising from the substance or mixture
    Formation of toxic gases is possible during heating or in case of fire.
    No further relevant information available.
- Advice for firefighters
  - Protective equipment: 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.
  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:
  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.
  See Section 13 for disposal information.

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: No special measures required.
Trade name: GC Fuji Automix LC (Paste B, Shades: A1, A2, and A3)

- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: Store only in unopened original receptacles.
  - Information about storage in one common storage facility: Store away from foodstuffs.
- Further information about storage conditions: Observe instructions for use / storage. Keep receptacle tightly sealed.
- Specific end use(s) No further relevant information available.

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: 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 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. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing.
  - Breathing equipment:
    - Suitable respiratory protective device recommended.

- Protection of hands:
  - Protective gloves
    - 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 cannot 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: Safety glasses
# 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>· <strong>General Information</strong></td>
<td></td>
</tr>
<tr>
<td>· <strong>Appearance:</strong></td>
<td></td>
</tr>
<tr>
<td>· Form: Paste</td>
<td></td>
</tr>
<tr>
<td>· Color: According to product specification</td>
<td></td>
</tr>
<tr>
<td>· Odor: Odorless</td>
<td></td>
</tr>
<tr>
<td>· Odor threshold: Not determined.</td>
<td></td>
</tr>
<tr>
<td>· <strong>pH-value:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td>· <strong>Change in condition</strong></td>
<td></td>
</tr>
<tr>
<td>· Melting point/Melting range: Undetermined.</td>
<td></td>
</tr>
<tr>
<td>· Boiling point/Boiling range: Undetermined.</td>
<td></td>
</tr>
<tr>
<td>· <strong>Flash point:</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td>· <strong>Flammability (solid, gaseous):</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td>· <strong>Ignition temperature:</strong></td>
<td>Undetermined.</td>
</tr>
<tr>
<td>· <strong>Decomposition temperature:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td>· <strong>Auto igniting:</strong></td>
<td>Product is not self-igniting.</td>
</tr>
<tr>
<td>· <strong>Danger of explosion:</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: Not determined.</td>
<td></td>
</tr>
<tr>
<td>· Upper: Not determined.</td>
<td></td>
</tr>
<tr>
<td>· <strong>Vapor pressure:</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td>· <strong>Density at 20 °C:</strong></td>
<td>2.1 g/cm³</td>
</tr>
<tr>
<td>· <strong>Relative density</strong></td>
<td>Not determined.</td>
</tr>
<tr>
<td>· <strong>Vapor 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</strong></td>
<td></td>
</tr>
<tr>
<td>· Water: Insoluble.</td>
<td></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: Not determined.</td>
<td></td>
</tr>
<tr>
<td>· Kinematic: Not determined.</td>
<td></td>
</tr>
<tr>
<td>· <strong>Solvent content:</strong></td>
<td></td>
</tr>
<tr>
<td>· Water: 22.3 %</td>
<td></td>
</tr>
<tr>
<td>· <strong>Solids content:</strong></td>
<td>66.0 %</td>
</tr>
<tr>
<td>· Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

---

# 10 Stability and reactivity

| Reactivity | No further relevant information available. |
| Chemical stability | Stable at ambient temperature. |
Trade name: GC Fuji Automix LC (Paste B, Shades: A1, A2, and A3)

- **Thermal decomposition / conditions to be avoided:**
  - No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
  - No dangerous reactions known.
- **Conditions to avoid**
  - No further relevant information available.
- **Incompatible materials:**
  - No further relevant information available.
- **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:** No further relevant information available.
  - **Primary irritant effect:**
    - **on the skin:** No irritant effect.
    - **on the eye:** Strong irritant with the danger of severe eye injury.
  - **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**
  - The product shows the following dangers according to internally approved calculation methods for preparations:
    - Corrosive

- **Carcinogenic categories**

  - **IARC (International Agency for Research on Cancer)**
    | Substance                  | Group |
    |---------------------------|-------|
    | ytterbium trifluoride     | 3     |
    | poly(acrylic acid)        | 3     |
    | silica, vitreous          | 3     |
    | silicon dioxide           | 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.

### 12 Ecological information

- **Toxicity**
  - **Aquatic toxicity:** No further relevant information available.
  - **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.
13 Disposal considerations

- Waste treatment methods
  - Recommendation: Dispose of contents/container in accordance with local/regional/national/international regulations.

- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - DOT/TDG, ADR, ADN, IMDG, IATA: Void

- UN proper shipping name
  - DOT/TDG, ADR, ADN, IMDG, IATA: Void

- Transport hazard class(es)
  - DOT, ADR, ADN, IMDG, IATA: Void

- Packing group
  - DOT/TDG, ADR, IMDG, IATA: Void

- Environmental hazards:
  - Not applicable.

- Special precautions for user
  - Not applicable.

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  - Not applicable.

- UN "Model Regulation": Void

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):
      - None of the ingredients is listed.
### TSCA (Toxic Substances Control Act):

<table>
<thead>
<tr>
<th>Substance</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>ytterbium trifluoride</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>poly(acrylic acid)</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>silica, vitreous</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>polybasic carboxylic acid**</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>silicon dioxide</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>silane**</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>poly(n-butyl methacrylate)</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>catalyst**</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>water, distilled</td>
<td>ACTIVE</td>
</tr>
</tbody>
</table>

### Canadian substance listings:

#### Canadian Domestic Substances List (DSL)

<table>
<thead>
<tr>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>poly(acrylic acid)</td>
</tr>
<tr>
<td>silica, vitreous</td>
</tr>
<tr>
<td>polybasic carboxylic acid**</td>
</tr>
<tr>
<td>silicon dioxide</td>
</tr>
<tr>
<td>silane**</td>
</tr>
<tr>
<td>poly(n-butyl methacrylate)</td>
</tr>
<tr>
<td>catalyst**</td>
</tr>
<tr>
<td>ethylene diaminetetraacetic acid sodium salt</td>
</tr>
<tr>
<td>water, distilled</td>
</tr>
</tbody>
</table>

#### Canadian Ingredient Disclosure list (limit 0.1%)

None of the ingredients is listed.

#### Canadian Ingredient Disclosure list (limit 1%)

<table>
<thead>
<tr>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>silica, vitreous</td>
</tr>
<tr>
<td>silicon dioxide</td>
</tr>
<tr>
<td>silane**</td>
</tr>
</tbody>
</table>

### GHS label elements

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

#### Hazard pictograms

- GHS05
- GHS07

#### Signal word

Danger

#### Hazard-determining components of labeling:

- ytterbium trifluoride
- polybasic carboxylic acid**
- catalyst**

#### Hazard statements

Harmful if swallowed, in contact with skin or if inhaled.
Causes serious eye damage.
Trade name: GC Fuji Automix LC (Paste B, Shades: A1, A2, and A3)

- Precautionary statements
  Avoid breathing dust/fume/gas/mist/vapours/spray.
  Wear protective gloves/protective clothing/eye protection/face protection.
  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  Immediately call a poison center/doctor.
  Take off immediately all contaminated clothing.
  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 the latest revision of the safety data sheet 03/19/2019
- Abbreviations and acronyms:
  GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  HCS: Hazard Communication Standard (USA)
  MSDS: Material Safety Data Sheet
  SDS: Safety Data Sheet
  ADN: Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways)
  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)
  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:
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  CHEMTREC® is a registered service mark of the American Chemistry Council, Inc.
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